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ABSTRACT

This study was an attempt to assist a rural county school system in central Georgia with instruction at the third grade level in reading skills development after voluntary and complete integration. Specifically it was to (1) determine the general nature of the integration process in the county and its topical relationships and effects upon instruction, (2) determine the effects of an individualized reading program on teachers and pupils and (3) determine the quality and utility of the reading program. It was found that the experimental materials (Individualized Reading Skills and Social Science Curriculum) and teacher treatment had a strong effect on achievement. (See TM 000 941, TM 000 942, TM 000 943 for the questionnaires used in the program.) (DLG)

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USE OF AN INDIVIDUALIZED READING PROGRAM UNDER VOLUNTARY COMPLETE INTEGRATION: EFFECTS ON THIRD GRADE PUPILS AND TEACHERS

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Section 1: Introduction

The present study was an attempt to assist a southern rural county school system in central Georgia with instruction at the third grade level in reading skills development after voluntary and complete integration. More specifically it was to (1) determine the general nature of the integration process in the county and its topical relationships and effects upon instruction, (2) determine the effects of an individualized reading program on teachers and pupils and (3) determine the quality and utility of the reading program.

The complaint is often heard from numerous individuals of various socioeconomic and professional levels in locales with racial problems that complete school integration-desegration drastically reduces the opportunity for any actual academic progress in school subjects. This claim has not been substantiated by logical argument or research. In fact, there is probably more evidence to refute the claim than there is to support it.

Since World War II, the general quality of educational facilities has not been significantly different for segregated schools. Rather, adequate learning materials and the technology of instruction have seriously lagged behind development and research relative to use in segregated and integrated schools. Preparation of instructional personnel of all races and cultures, especially public school teachers, has not been adequate with respect to human behavior, learning theory and practice, interpersonal relationships, technology, and use of materials. There have been wide differences in the

quality of teachers produced by various black and white institutions of higher learning with little communality between many programs. Probably one-half of all teachers are competent enough to meet the minimal needs of children for education. "In many systems, only a small fraction of teachers can be considered qualified by modern standards of teacher training and preparation" (Spaulding, 1970). In general, integrated schools are probably not significantly different from previously segregated schools. The major difference with integration seems to be that there is now a scape goat (integration) for poor quality schools. This may be an excellent upshot if there is rapid movement and complete acceptance of the integrated condition with goal orientation to provide excellent programs, especially with respect to the deficiencies alluded to above. It would be reasonable that if one criticism aimed at integration is that it lowers the level of the education given, a demonstrated improvement in integrated schools would not only deflate this argument but ease the tension in the community which such an assumption might generate.

The claim has often been made that lack of adequate financial and administrative support for schools results in the inferior achievement of pupils. The causal basis for such outcomes is easy to hypothesize but difficult to investigate. Only through the expenditure of large sums of money can the basic conditions be modified within a framework compatible with a strong research design.

It is probably true that large sums of money are required for adequate training and education of personnel, purchasing of materials, and making technology operational. The present study was conceived as a "shared cost project." The Center for Educational Improvement, University of Georgia, supplied approximately $20,000 direct costs (supplies, travel, graduate assistants, and secretarial assistance) plus overhead. In addition, approximately $7,000 worth of the time of the director of the project was supplied by the University of Georgia. Approximately $6,000 direct costs (tests, test scoring, and various supplies) plus overhead and various personnel time was supplied by the Henry County Public Schools. It is estimated that a traditional proposal for a research project of the magnitude of the present one would cost well over $200,000. The "shared cost model" should probably be more the rule for educational research and development.

Performance contracting and accountability have become necessary phenomena as one looks at overall quality of training and the broader more important responsibility of public schools, education. It is no great wonder that they are in vogue in view of the propositions alluded to above. Even in view of overall deficiencies, it is probably true that training and education reach acceptable levels fifty percent of the time. The fifty percent of instances where education is inadequate is where corporations should be encouraged to performance contract and, in most instances, accomplish contract goals through training activities often based on the stimulus-response principle. High level educational outcomes must be left to the fifty

percent acceptable performance with an intensified effort to optimize competencies, technology and personnel. If such is not the case, corporations may well be performance contracting for a greater and greater share of public school instruction and the quality of education could become more inferior than before the introduction of the phenomena of performance contracting and accountability. (For extensive treatment see Mullen, 1971 and Educational Testing Service, 1971.)

The quality and level of performance in learning is determined by factors such as teacher quality, methods and materials of instruction, adequacy of facilities, and motivation. These and other factors enter into the scores on achievement tests determining quality and level of learning of students in different locales, socioeconomic levels, ability levels, and so forth. A fuller treatment will not be made of the complex classroom functioning of factors influencing learning since many researchers, public school personnel and most psychologists are familiar enough with them to comprehend and evaluate what will follow.

Probably the most immediately manipulative of the factors influencing learning are materials, methods, and facilities, and to some extent teacher quality and motivation. These factors will be central to the present study.

Language and verbal ability are highly generalizable functions determining achievement in all subject areas. It has been widely recognized that children entering school with adequate readiness as

measured by readiness tests (language and numbers) and acquiring subsequent basic skills progress best throughout school. Lack of or low readiness to enter or continue to progress in school and to acquire basic skills has been generally associated with depressed areas, the socioeconomically disadvantaged, and/or low ability. Depressed areas and disadvantaged youth are where immediate ameliorative action is needed.

Goolsby (1968) has shown that head start subjects trained to listen for details, purposes, organizations, and evaluations followed by structured multiple choice test questioning progressed substantially toward readiness as measured by the Metropolitan Readiness Test (MRT) over an eight-week period. The materials used were in A Curriculum in Listening Achievement (Goolsby, 1969). A general population of subjects did not show the same kind of progress. On the basis of this evidence and subsequent informal evidence at preprimary and primary levels where the type of procedure used with the listening curriculum and with students reading the passages was employed, an intensive effort has been made to develop social science materials using the listening curriculum as a model.

The Individualized Reading Skills and Social Science Curriculum (IRSS), Book P, has been designed for the present study with special features and employs significant psychological principles. The curriculum begins at a point when most children are expected to start reading the printed page. If a child cannot read the printed

page, the curriculum provides supplementary listening passages and other readiness training and assessment. The child begins with the materials and procedures of the curriculum at the level where his individual progress has been assessed. These features plus the structure of the materials and psychological orientations give most children an optimal opportunity to learn the skills of reading at a time appropriate for effective utilization in later learning.

The desired behavioral outcomes are defined by the structure of the materials so that teachers and students readily understand the objectives of reading skills development and the individualized nature of IRSS. Seth Spaulding, Director, Department of School and Higher Education, UNESCO, in an address delivered at the ICET Conference in Sydney, Australia in August of 1970 made the following statements concerning objectives and individualized instruction:

> "For generations we have been exhorting teachers to set goals and objectives and then to teach towards these goals and objectives. Only within the last decade or so, however, have psychologists and educational technologists forced educators and academicians to begin defining more specifically the behavior patterns we are trying to teach in school. This has forced great attention on the individual student, with parallel stress on individualized rather than group-based instruction. We are all now familiar with the assertion of the behavioral psychologist that if the student does not learn, it is not the fault of the student, it is the fault of the teacher or of the educational system.
>
> To one degree or another, we all accept this basic principle. The question is how, in a mass system of education, can you create the kind of learning-teaching environment in which at least the basic skills, attitudes and knowledges we wish to teach are specified in great detail, and in which each individual can have an infinite variety of alternatives so that he can learn in his style and at his own speed?"

The entire address by Spaulding, "New Developments in Education for the Seventies," is highly relevant to the present study and is recommended for the reader to peruse.

The general structure of the IRSS material is short passages followed by four-response multiple choice questions. Short passages followed by questions are important for several reasons. First, the student is able to be more independent and self-directing since there are scorable questions relating directly to each passage. The structured questions for each passage immediately direct the student's attention to the important outcomes of acquiring social science knowledges, skills and understanding and acquiring the skills of reading. The skills of reading are determining details, purposes, organization, and evaluation from reading the passages. The student and teacher together can use the score on each set of questions for each passage to determine progress and make a decision with regard to proceeding to the next passage.

The skills are sequenced as to complexity so that less complex skills are developed first. The less difficult items for each passage are also presented first so that the student does not become discouraged. Also, easy items are strategically placed at frequent intervals. This design encourages response to all the items.

The student and/or the teacher is able to score the questions for a given passage as soon as the student finishes. This allows the student to receive immediate reinforcement (immediate feedback).

The IRSS material is organized by major themes which complement social studies curricula content, in general, at the primary grade level.

The content for the passages is based upon the concept of a functional community. A functional community includes those geographic, social, political, and economic components which produce a viable setting for all human interactions.

Site, route, and boundary components are concepts which provide the foundation for the functional community. Sites are places which are referents in the learner's increasingly complex world. The home is one of the first sites a learner becomes aware of during the developmental process. Gradually other sites, for example, the school, grocery store, and park become reference points. During this period, routes become significant for the child. Routes are the linkages between the home and the expanding site perspectives of the learner. Children associate them with trips to the store, to school, and work. Boundaries define the limits within which geographical experiences occur. Property, county, state and international boundaries represent a few which the student comes in contact with as the magnitude of sites and routes increases.

The program is designed to complement site, route, and boundary experiences of learners and relate them to a conceptual structure. The learners are also provided with reading experiences designed to expand their perception and comprehension of life space.

The economic, political, and social components of the community are closely related to sites, routes, and boundaries. Sites with particular economic functions, such as a bank, steel mill, or lumber yard are important components of certain communities. The interaction of those sites and others along routes is an example of economic interdependence. The political function of sites, for example, the courthouse, state capital, and national capital, is dependent upon boundaries and route linkages. The social component is represented by such things as hospitals, parks, and population density. Situations are presented to reflect social problems associated with displacement of people in favor of airports and expressway routes, to name only two.

The quality of community life is dependent upon the environment. The problems in recreating a healthy environment free of air, water, and noise pollution are investigated through the reading of passages and related activities.

The sequence provides the learner with a conceptual geographic framework. That framework (sites, routes, and boundaries) is consistent throughout the sequence and produces an integrating effect. The learner's evaluation of the components as situations vary and circumstances change encourages the assessment of additional factors which operate in local communities, but extend also to a national and international setting.

The following passage and questions are a sample of the IRSS materials:

Jerry and Mr. Smith were sitting in City Park. The valley and river were in front of them. Across the valley they saw the heavy trucks. They were moving slowly on the highway. The highway was steep and had many curves. It led from the valley bottom to the ridge top.

"That hill over there is known as Stagecoach Hill," said Mr. Smith. "A long time ago the stagecoach trail between our town and Highland followed that part of the hill. Extra horses were needed to make the pull when the stagecoach was going up the hill. When coming down the driver went very slowly so that there wouldn't be a runaway. Horses are no longer used. The trucks have replaced the stagecoaches. But the name of the hill has remained the same. Everyone still calls it Stagecoach Hill."

1. What is the best title for these paragraphs?
   1) In Old Days
   2) In the Park
   3) The Valley
   4) Stagecoach Hill

2. What did Jerry and Mr. Smith <u>not</u> see across the valley?
   1) A stagecoach
   2) A highway
   3) A hill
   4) A ridge top

3. Where did the highway across Stagecoach Hill lead?
   1) To our town
   2) A Highville
   3) To Highland
   4) To the city

4. Why were extra horses needed to pull the stagecoach up the hill?
   1) The hill was steep.
   2) The hill was muddy.
   3) The stagecoach was very heavy.
   4) The horses were small.

5. Why did the driver go slowly down the hill?
   1) To rest the horses
   2) To make it easy on the riders
   3) To keep from having a runaway
   4) To stop for water

6. What did Jerry and Mr. Smith see between them and Stagecoach Hill?
   1) Heavy trucks
   2) The river
   3) Curves
   4) Trees

7. What was true about the trail up the steep hill for the stagecoach to travel?
   1) It was easy to travel.
   2) It was wide.
   3) It was fast.
   4) It had many curves.

The intent is to use the materials to train students in language development of reading skills as represented by the following outline in Iowa Tests of Basic Skills:

D(Details): To recognize and understand stated or implied factual details and relationships

D-1: To recognize and understand important facts and details

D-2: To recognize and understand implied facts and relationships

D-3: To deduce the meaning of words or phrases from context

P(Purpose): To develop skill in discerning the purpose or main idea of a paragraph or selection

P-1: To detect the main purpose of a paragraph or selection

P-2: To recognize the main idea or topic of a paragraph or selection

O(Organization): To develop ability to organize ideas.

O-1: To recognize common elements of parallel topics in incidents or paragraphs

O-2: To recognize proper time sequence

E(Evaluation): To develop skill in evaluating what is read

E-1: To develop generalization from a selection

E-2: To recognize the writer's viewpoint, attitude, or intention.

E-3: To recognize the mood or tone of a selection

E-4: To recognize outstanding qualities of style or structure.

Pre-reading activities as outlined in Evaluation of Cognitive Development--Pre-reading Skills (Goolsby, 1969 see Appendix III) have been designed to be used in bringing non-readers to "reading threshold." "Reading threshold" for a given pupil is the condition of his having exhibited the behavior outlined on the pre-reading skills inventory and can orally verbalize by reading three six-to-ten word sentences. All the materials used in this study were designed to be used with no significant changes in classroom procedures. Therefore, very little additional instruction time was usurped.

Section 2: Procedures

Experimental Procedures

All third grades in a rural county in central Georgia, fourteen experimental groups (E) and eight comparison groups (C), were identified in six school buildings. Table 1 presents a detailed description of the groups at the beginning of the experiment. As can be seen from the table, the experimental and comparison groups were comparable on major variables.

At the beginning of school in September and before the present study was proposed, all groups were constituted according to ability and achievement levels as, in general, high, medium and low specifically for mathematics and reading.

A reading specialist was assigned to each school as a part of the regular program to handle special reading problems. The specialists were considered good classroom teachers, but had relatively little specialized reading training. They were judged to have functioned about the same in each of the six schools.

A typical school day for instruction in the E and C groups consisted of two hours for reading and language arts during the mornings, forty-five minutes for mathematics, and two forty-minute periods for various activities such as music, library, and/or remedial reading during the afternoon. The C groups remained on this general schedule during the experiment and employed the traditionally prescribed programs.

TABLE 1

Characteristics of Experimental and Comparison Groups

		Experimental	Comparison
Number of Students[a]		367	191
IQ-Otis-Lennon: Primary 1, Form J -	Mean	87.6	88.8
	Std. Dev.	14.5	14.8
IQ-Otis-Lennon: Primary 1, Form K -	Mean	92.9	91.6
	Std. Dev.	17.9	14.9
Age--months, September, 1970 -	Mean	100.7	101.1
	Std. Dev.	5.7	6.9
Racial composition--proportion white		59%	63%
Sex--proportion male		51%	54%
Number of days absent -	Mean	8.5	8.8
	Std. Dev.	9.2	9.6
Number of Siblings -	Mean	3.9	3.3
	Std. Dev.	2.5	2.6
Father's occupational status[b]	Mean	2.4	2.5
	Std. Dev.	.6	.6

[a]Number of students present at mid year with substantially complete data from October testing. Number with sufficiently complete data for various test score analyses fluctuated during course of year.

[b]Scaled as follows: 1 = professional, 2 = skilled, 3 = unskilled.

Approximately half of the students in the E groups extremely deficient in reading were selected to receive remedial reading in each of the forty minute periods in the afternoon while the remaining students participated in music and library activities. Students extremely deficient in reading, therefore, used one of their forty minute periods for remedial reading and one for music while the better students divided their time between music and library.

The E groups received approximately fifty minutes per day of instruction utilizing the individualized reading program. The remaining seventy minutes for reading and language arts were devoted to the basal reading program utilizing the Harper-Row Series, a part of the traditionally prescribed program. All other instruction followed the traditionally prescribed programs.

The instructional program for the E groups utilizing the individualized reading program was divided into two phases. There were approximately thirty and forty-five days of instruction in Phase I and Phase II, respectively. Phase I lasted from about November 1 to February 1 and Phase II from about February 1 to May 1. Phase I operated with significant direction by University of Georgia personnel for purposes of testing, coordination, orientation, treatment, and supervision. Phase II operated with minimal direction from University of Georgia personnel for the obvious reason of determining effects of the individualized program without intensive intervention and changes in the regular program. Testing and evaluations marked the beginning and end of phases.

The first seven to ten days of Phase I was considered to be a "warm-up" period for both teachers and pupils. During "warm-up" a determination was made concerning the reading status of each pupil. If a given pupil could not read the first two or three passages with better than fifty percent correct responses to the questions following each passage, he was placed at a listening station to listen to the passage and questions while attempting to follow along with the written passages in the book. The program is designed to function the same for listening as for reading with the only difference being the mode of presentation, i.e., tape recording versus the printed page.

The student meeting the criterion for reading proceeded at his own rate. He would locate the passage with questions which he was to read and make responses to the questions. He was supplied with an answer sheet (see Appendix I) for several passages. After reading a given passage, he would record and grid the number of a given passage and his responses to the questions on the answer sheet. He would score his own answer sheet and chart the number correct on the student record sheet in vertical bar graph form (see Appendix II). He would then proceed to the next passage. During this entire process the teacher was to serve as a good supervisor, adviser and motivator.

As soon as a student at a listening station (located in each room for each group) could meet the criterion of fifty or sixty percent on several successive passages he was placed on regular reading as described above. If the listening activity did not bring him to "threshold" as described on Page 12, an assessment was made of his

pre-reading skills by the use of Evaluation of Cognitive Development-Pre-reading Skills (Goolsby, 1969 see Appendix III). Treatment to a near perfect criterion on the pre-reading skills was recommended. During the treatment for pre-reading skills, the student was to continue some listening activities. There was to be no longer than one day during which the student was to receive no treatment in some form (reading or listening) with the individualized program. For severely educationally handicapped students, some phonics and alphabet training was recommended.

The experimental treatment of teachers was considered vital during both phases of the project. During Phase I teachers met on Monday afternoon for approximately one and one-half hours for purposes of direction, orientation, reorientation, discussion of relevant problems, responding to tests and performing other evaluative procedures. During Phase II, the teachers were to continue to meet for the purposes alluded to above, but under the direction of the county supervisor for instruction. It was recommended that the ITBS Teachers Manual be used for study by the teachers to determine first hand the purposes of the individualized materials relative to reading. Teachers were encouraged to respond to the individualized materials and consult the ITBS Teachers Manual for clarification of the items according to the ITBS reading skills categories. The teacher was encouraged to learn what kinds of items she marked incorrectly on each test and to try to improve in those areas.

A formal instructional course, Classroom Learning, was arranged to be offered during Phase II to experimental teachers and certain other administrative personnel and supervisors. Since only two individuals registered for the course, it could not be offered.

In addition to carrying out procedures for placing students at the appropriate place in the individualized program and general supervision as has been described, teachers were to perform standarized testing, gather student personal data, respond to tests themselves, prepare "expected" rankings of students on standardized measures, and evaluate the individualized program as outlined under Measurement on Page 20.

In addition to the program being considered a treatment for teachers, the procedures of teachers responding to tests and preparing "expected" rankings of students was considered a substantial treatment. They were asked to prepare "expected" rankings on Subtests Vocabulary and Reading of ITBS prior to their students responding to the same tests. Scores and their "expected" rankings were then sent to them for their perusal.

During both phases a graduate assistant from the University of Georgia was assigned to visit the E groups to assist with special problems and for coordination purposes. The assistant visited each classroom in the E groups approximately once each week or ten days. He also managed testing in cooperation with the county supervisor for instruction.

During April, the more advanced groups using the individualized program were trained to write passages and questions similar to the program materials and relative to their own experiences. These passages and questions were reproduced and distributed to the other E groups for use. The production of material by the advanced groups under teacher supervision was so rapid that it was very difficult to reproduce and distribute them. The quality of their passages was considered very good, but their experiences limited.

At the end of Phase I, it was recommended that the E groups be reconstituted to eliminate the extreme homogeniety which existed in some groups. This recommendation was made on the basis of the consensus of four consultants, functional aspects within the classroom, and the nature of individualized instruction. The minimal recommendation was to assign middle to upper-level performers on several measures randomly to groups and teachers while assigning middle to lower-level performers randomly to groups and teachers.

It was viewed as highly important for parents to have experimental treatment by receiving mostly positive information about student progress and responding to extensive questionnaires about student progress, school operation and relationships, and integration. Only one report of progress and a very limited questionnaire, Henry County School Questionnaire (see Appendix V), were prepared and distributed very near the end of the project. The results of the questionnaire are presented on Pages 58 - 60.

Measurement Procedures

Every effort was made to obtain scores for every experimental and comparison subject for all of the variables reported. If it was not possible to obtain a score for a student, it was necessary to discard that student's scores in some of the analyses which follow. Thus, while there were 420 students in the experimental classes and 210 in the comparison classes, many analyses account for fewer than the total number of 630 students.

Personal Data

For each student in the experimental and comparison groups personal data representing the following variables were collected:

Number of Siblings

Days Absent

Ethnic Group (Black or White)

Age

Sex

It should be noted that "number of siblings" does not refer to the number of children in the family but to the number of brothers and sisters.

One additional personal datum for each subject reflected socio-economic status of the child's family. To obtain this information, each teacher classified each of her students according to his father's occupation on a three point scale (see Appendix IV). Category 1 included those whose occupation might generally be classified as "professional." For the most part, these occupations were ones

which required at least a bachelor's degree for admission. Category 2, which may be referred to as "skilled," included occupations requiring substantial training and ability for success but not at the level of the first category. Category 3, "unskilled," included those jobs which required little preparation or training, were relatively low-paying and offered little security. The protocol on which teachers based their classifications is shown in Appendix IV.

This classification scheme does not offer the degree of differentiation available from scales demanding higher levels of training for the rates, such as the Hollingshead (1958) or Warner (1949) scales. Nevertheless, it was adopted because it was believed that the teachers involved, knowing the community as they did, could place their students quite accurately as coming from homes representing one of the three categories just described. It was felt that the additional effort required to obtain a more precise classification might not result in a substantially more accurate classification in view of the purpose for which the classification system was introduced. That purpose was to classify students at three levels to define a main effect for analyses of variance.

Ability Data For Students

The Otis-Lennon Mental Ability Test (OLMAT) was administered in October (Form J, Level 1) and February (Form K, Level 1) to all experimental and comparison classes.

Achievement Data For Students

The Iowa Tests of Basic Skills (ITBS) was administered to all experimental and comparison classes in October (Form 3, all subtests), January (Form 2, Tests V and R), and May (Form 4, all subtests). The battery included the subtests: Vocabulary (V), Reading (R), Language (L), Work Study Skills (W), and Arithmetic (A). Form 2 of ITBS was administered to students after thirty days of treatment for purposes of feedback to teachers and pupils and for making a preliminary report of progress to administrative personnel for future planning. The preliminary report based on beginning and ending of Phase I data which included Form 2 of ITBS was essentially the same as the overall analyses at the end of Phase II so far as ITBS was concerned. Form 2 was not considered necessary for an analysis of overall outcomes.

The Comprehensive Tests of Basic Skills (CTBS) was administered to all experimental and comparison classes in October (Form R, Level 1, all subtests) and May (Form Q, Level 1, all subtests). The battery includes the subtests: Reading (R), Language (L), Arithmetic (A), and Study Skills (S). The CTBS was administered because it had been given in the county for several years. "Teaching to the test" was expected for the CTBS and is not considered uncommon nor inadvisable when emphases and/or outcomes are highly specific (Goolsby, 1971). "Teaching to the test" sometimes practiced is undesirable. This outcome is presented on Pages 35 and 36. This testing permitted comparison of achievement results not only by the groups but over time as well.

In February (Form A) and in May (Form B) of the Botel Reading Inventory (BRI) was administered in all classes. The BRI provides two scores which were utilized to determine major results. These are Instructional Level and Potential Level. Each of the scores represents the level up to which the student has essentially mastered certain reading skills. The Instructional Level attained represents mastery in Word Recognition and Word Opposites (as read by the student). The Achievement Level represents mastery of Word Opposites as presented orally by the teacher and may be considered to some extent to be a measure of extensiveness of vocabulary. In addition, the BRI provides eight other scores which were utilized in minor or subsidiary analyses. These are Consonant Sounds, Blends, Digraphs, Rhyming Words, Long and Short Vowels, Vowel Blends, Syllabication-numbers, Syllabication-accent, and Nonsense Words.

Data For Teachers

Teachers assigned themselves six digit numbers known only to the individual teacher. Scores were recorded by these six digit numbers and answer sheets were returned to the teachers in sealed envelopes with six digit numbers appearing on the outside. The following data for teachers was collected: (1) Nelson-Denny Reading Test (NDRT), Subtests--V and C, and reading rate raw scores for October (Form A) and May (Form B). (2) ITBS, Subtests--V, R, A-1, and A-2 raw and grade equivalent scores in October (Form 3, Grade Level 8-9) and May (Form 4, Grade Level 8-9). (3) OLMAT, Advanced Level, in May.

Teachers assigned an "expected" rank of each child on Subtests V and R of the ITBS in November and May. For example, a teacher would assign "expected" rankings of 1, 2, or 3, etc., to students in a given class without knowledge of the student's earned score on Subtests V and R, Form 3 or 4 of ITBS.

Affective Measures

Teachers completed the Student Affective Behavior Checklist (SABC) (Robertson, EPIC Diversified Systems Corporation) in May for each student in the E and C groups.

A questionnaire, (Henry County School Questionnaire--Appendix V) was completed by parents of students in the E groups in May relative to integration-desegregation and some general information areas. This questionnaire was prepared by the school system personnel after deciding that the School Desegregation Questionnaire by David J. Mullen (see Appendix VI) and the School Integration Questions for Parents (see Appendix VII), prepared specifically for the project by its director and consultants, were inappropriate at the time.

Testing as an Experimental Variable

Many of the pupils in both the E and C groups could have been considered as not "test wise." Since the experimental treatment with the reading materials involved significant testing procedures, testing of all subjects (E and C) was planned to be extensive and intensive enough to rule out experimental effects attributable to testing procedures or "test wiseness."

Section 3: Achievement of Students

It is difficult to evaluate student achievement in terms of actual learning. This is the mission of criterion-referenced testing, a feature of many individualized programs. The score made by a student on a criterion-referenced test tells the actual nature of his achievement, e.g., 45 words per minute on a typing test or eight right out of ten long division problems with two digit divisors and five digit dividends. Such a structure is difficult if not impossible to attain for a reading-oriented, social-studies-content system such as IRSS. Accordingly, IRSS does not have criterion-referenced tests. Therefore, actual learning within IRSS can be evaluated only indirectly by scores on its tests and the number of passages completed. Summaries of these measures are presented for experimental students in Section 4, largely in connection with evaluation of the materials themselves.

In order to compare student achievement under IRSS with that under a more conventional setting, the ideal solution would be to administer criterion-referenced tests to samples of students from each setting. However, with such tests absent even in IRSS itself, such a solution is impossible.

The only alternative is to use norm-referenced tests. These tests essentially rank the students according to whatever the tests measure. Nearly all standardized tests are of this type. The grade-equivalent scores they provide compare the performance of a given student with the ranking attained in the norm group by a similar performance. Thus, a grade equivalent score of 4.1 attained by a

beginning fourth grade student simply means that he got the same number right as middle-ranked beginning fourth grade students in the norm group.

Obviously such scores have weaknesses. What do the tests themselves measure? To what extent do two equal scores represent the same knowledge? After all, two equal but low scores could be obtained by two students answering correctly entirely different sets of questions within the same test. These problems led to the decision to use a variety of measures in comparing performance between the experimental and comparison groups, thus decreasing the probability of misleading results from the use of only a limited number of measures.

Each set of test results thus obtained needs to be evaluated on its own merits. These evaluations are now presented, followed by an attempt to draw more general conclusions from the results of the entire group of tests.

The basic procedure for analysis of achievement results was analysis of covariance. This procedure uses a vector of scores for each subject, some of which are criterion (achievement) scores and some of which are covariates. The covariate scores theoretically have the function of "equalizing" the groups for chance differences in ability or pre-treatment achievement level resulting from random assignment to the experimental or comparison groups. Of course, the groups were not randomly assigned. Nevertheless, any differences between the experimental and comparison groups seem as slight as

those which might occur due to random assignment, and there is no logical connection between group membership and any function of the program. Thus, Experimental Condition was adopted as one factor of the multivariate analyses of covariance designs used to evaluate outcomes. The initial similarities between the experimental and comparison groups may be seen from Tables 1 and 4 the latter showing final as well as initial achievement data.

One other factor by which students could be grouped for analyses showed no significant statistical relationship to initial ability or achievement levels. This factor was sex. While mean initial achievement levels were higher for girls, this difference was not statistically significant. Other interesting factors, such as ability levels, occupational levels of the students' fathers and race are clearly related to potential covariates and are analyzed by other means.

Other assumptions required for multivariate analysis of covariance are homogeniety of variance and normal distributions for all variables. These characteristics were not investigated exhaustively, but inspection of the data gives no substantial reason to suspect they were violated.

In view of the foregoing, the design adopted for analyses of ITBS, CTBS and BRI scores is a complete factorial with two factors: (1) experimental condition--two levels, experimental and comparison and (2) sex--two levels, male and female. The program available for analysis was Multivariate Analysis of Variance for Small Computers (Hughes, LaRue, and Yost, 1969). This program is a smaller capacity

TABLE 2

Multivariate Analysis of Covariance Using Wilks' Lambda Criterion and Rao's Approximation: ITBS Vocabulary and Reading

	Means (Standard Deviations)			
	Experimental		Comparison	
Criteria	Male (N = 154)	Female (N = 147)	Male (N = 78)	Female (N = 76)
ITBS-V 5-71	2.9(1.0)	3.2(0.9)	2.9(0.9)	3.2(0.9)
ITBS-R 5-71	2.9(1.1)	3.3(1.1)	2.7(0.8)	3.2(1.0)
Covariates				
ITBS-V 10-70	2.2(1.0)	2.5(0.9)	2.4(0.9)	2.7(0.8)
ITBS-R 10-70	2.4(0.9)	2.6(0.9)	2.5(0.7)	2.7(0.9)
Otis-Lennon IQ 2-71	93.0(18.7)	94.3(17.7)	90.3(14.3)	94.0(14.7)

MANCOVA	F	df	p less than
Experimental Condition	4.979	2,447	.007
Sex	6.477	2,447	.001
Sex X Exp. Cond.	.382	2,447	.682

Univariate Criterion: ITBS-V	F	df	p less than	higher mean[a]
Experimental Condition	3.112	1,448	.078	experimental
Sex	5.837	1,448	.016	female
Sex X Exp. Cond.	.481	1,448	.488	_____

Univariate Criterion: ITBS-R				
Experimental Condition	9.824	1,448	.001	experimental
Sex	12.074	1,448	.001	female
Sex X Exp. Cond.	.027	1,448	.868	_____

[a]After adjustment for covariates.

TABLE 3

Groups With Higher Mean Criterion Scores After Adjustment For Covariates in Multivariate Analyses of Covariance

	Group With Higher Adjusted Mean			
Criteria	Exp.	Comp.	Male	Female
ITBS-Vocabulary	X			X*
ITBS-Reading	X*			X*
ITBS-Language Skills				
Spelling	X			X*
Capitalization	X			X*
Punctuation	X			X*
Usage	X			X*
ITBS-Study Skills				
Maps	X*		X	
Graphs	X			X*
References	X			X*
Botel-Instru. Level	X			X*
Potential Level		X		X*
Consonants[a]	X			X
Vowels[b]	X*			X*
Syllabication[c]	X			X
Nonsense Words	X*		X	
Rhyming words	X*			X*
CTBS-Reading				
Vocabulary	X			X
Comprehension	X			X*
CTBS-Language Skills				
Mechanics		X		X*
Expression		X		X*
Spelling		X		X*
CTBS-Study Skills		X*		X

*Statistically significant difference, $p < .05$ for test of univariate criterion with multiple covariates.

[a]Sum of Consonants, Blends and Digraphs scores

[b]Sum of Vowels-1 and Vowels-2 scores

[c]Sum of Syllabication-1 and Syllabication-2 scores

TABLE 4

Initial and Final Academic Achievement Levels of Experimental and Comparison Groups, Means and (Standard Deviations)

Test	Initial		Final	
	Experimental	Comparison	Experimental	Comparison
ITBS-Vocabulary[d]	2.3(0.9)	2.5(0.9)	3.1(1.0)	3.0(0.9)
Reading[d]	2.5(0.9)	2.6(0.9)	3.1(1.1)	3.0(0.9)
Spelling[d]	2.3(1.1)	2.3(0.9)	3.3(1.2)	3.3(1.3)
Capitalization[d]	2.4(0.9)	2.5(0.8)	3.1(1.1)	3.1(1.1)
Punctuation[d]	2.6(1.1)	2.5(0.8)	3.3(1.2)	3.2(1.2)
Usage[d]	2.3(1.0)	2.3(0.8)	2.8(1.1)	2.7(0.9)
Maps[d]	2.5(0.8)	2.6(0.9)	3.2(1.0)	3.1(1.0)
Graphs[d]	2.5(0.9)	2.5(0.9)	3.0(1.1)	2.9(1.0)
References[d]	2.6(0.8)	2.7(0.8)	3.0(0.9)	3.0(0.9)
Botel-Instr. Level[a]	4.6(2.7)	4.3(2.6)	5.5(2.6)	5.6(2.6)
Potential Level[a]	5.8(3.1)	5.5(3.0)	6.1(2.7)	6.1(2.2)
Consonants[c]	15.4(3.8)	14.7(4.4)	15.1(3.5)	15.2(3.6)
Blends[c]	10.5(7.1)	10.6(6.9)	12.5(5.9)	12.0(5.9)
Digraphs[c]	2.5(1.9)	2.3(1.9)	2.8(1.8)	2.8(1.7)
Rhyming Words	[b]	[b]	2.9(1.3)	2.7(1.4)
Vowels 1[c]	5.3(3.7)	4.9(3.5)	5.4(3.0)	5.2(2.9)
Vowels 2[c]	3.5(2.9)	3.2(2.8)	3.8(2.1)	3.8(2.2)
Syllabication 1[c]	6.0(3.0)	7.1(3.1)	7.7(2.7)	7.4(2.5)
Syllabication 2[c]	4.8(5.2)	4.2(2.6)	5.1(2.7)	4.6(2.5)
Nonsense Words[c]	3.9(5.0)	3.2(5.0)	5.2(5.5)	4.2(4.7)
CTBS-Vocabulary[d]	2.5(0.9)	2.3(0.9)	3.1(1.2)	3.0(1.0)
Comprehension[d]	2.4(1.2)	2.4(1.2)	3.1(1.5)	3.0(1.2)
Mechanics[d]	2.4(1.2)	2.4(1.0)	3.3(1.6)	3.3(1.4)
Expression[d]	2.3(1.4)	2.3(1.0)	3.0(1.5)	2.9(1.3)
Spelling[d]	2.6(1.1)	2.4(1.0)	3.3(1.4)	3.2(1.5)
Study Skills[d]	2.5(1.0)	2.6(1.1)	3.2(1.3)	3.2(1.2)

[a]Scaled as follows: 1 = preprimary, 2 = primary, 3 = 1st grade, 4 = 2nd grade--1st semester, 5 = 2nd grade--2nd semester, etc.

[b]Not available (see text)

[c]Number of correct responses

[d]Grade Equivalent Scores (G.E.)

version of the corresponding program in Multivariate Statistical Programs (Clyde, Cramer and Sherrin, 1966). The capacity of the smaller program was sufficient for the analyses required by the project. These programs are very flexible in that unequal numbers of cases per cell are handled with appropriate adjustment of significance levels according to the method presented by Bock (1963). Also, the program checks significance of the linear relationship between potential covariates and criteria. For all covariates used in analyzing project data, the F ratios associated with the sums of squares for regression of covariates on criteria were significant at less than the .001 level of probability.

ITBS Results

Analysis of ITBS Vocabulary and Reading scores is the most basic to evaluation. Improvement of reading was the goal of the project, and materials were developed along the structural lines defined by the ITBS cognitive model involving details, purposes, organization, and evaluation. Covariates are OLMAT IQ and initial ITBS Vocabulary and Reading scores. Scores from the February administration of the OLMAT were used in this and all subsequently described analyses of covariance. They were judged to be more reliable in view of the students' increasing familiarity with testing situations.

Table 2 gives results of this analysis. The number of cases shown is less than the total in the experimental and comparison groups, since only complete sets of scores could be analyzed.

Missing scores were due to absences. Therefore, results of this or subsequent analyses may not be generalized with a high level of confidence to students with frequent absences. As shown in Table 2, the differences between groups are highly significant statistically. The univariate analyses show that the experimental group is favored. This result may be understood in that the comparison group had initially higher scores on two of the three covariates but essentially only equaled the performance of the experimental group on the criteria.

Even "equalizing" for lower initial achievement of boys, girls' final results were significantly higher. A tentative interpretation is that at this point in development girls are profiting more from instruction than boys.

There was no interaction effect of significance. Therefore, girls apparently do much better than boys in either the experimental or comparison setting.

Two additional analyses of covariance were performed on ITBS results, one for Language Skills and one for Study Skills. Again initial achievement levels on corresponding subtests and IQ were used as covariates. In neither analysis was there a significant difference between experimental groups in the multivariate sense. That is, considering Language and Study Skills as two global areas, there is no evidence that the experimental treatment was better or worse than the comparison. However, on the Maps subtest of Study Skills, the experimental group was significantly better after adjustment for covariates. This outcome was to be expected in view of the

fact that the IRSS had substantial substantive content regarding maps.

This latter outcome is noted in Table 3 which shows the groups favored after adjustment for covariates for every analysis of covariance reported herein. As seen here, even though not significant statistically, the experimental ITBS Language and Study Skills means were consistently higher after adjustment for covariates than those for the comparison group. Actual means are shown in Table 4. With the exception of the Maps subtest, girls' means were significantly higher.

ITBS Arithemetic Concepts and Problem Solving scores were not analyzed, since project activities bore no relationship to mathematics.

The question of the effects of race, father's occupation and ability remain to be considered. The interest here is not in the effects themselves but in their interaction with experimental condition. Specifically, (1) Does one race (but not both) respond better to a particular treatment (experimental or comparison)? (2) Do children of fathers in a given occupational grouping respond better to a particular treatment? (3) Do children of some restricted ability range do better under a given treatment? To answer these questions three multivariate analyses of variance were performed. Criteria for all three analyses were gain scores on all nine ITBS subtests (final minus initial scores). Each analysis had the factors experimental condition and sex. In addition, the following factors were used successively in the three analyses:

Father's occupation--three levels, professional, skilled

TABLE 5

Mean Grade Equivalent Gain Scores by Race and Experimental Condition

	Black		White	
	Exper.	Comp.	Exper.	Comp.
ITBS Oct. - May	N = 137	N = 59	N = 197	N = 107
Vocabulary	.70	.37	.72	.56
Reading	.55	.34	.68	.37
Spelling	.91	.65	1.06	1.00
Capitalization	.46	.43	.87	.64
Punctuation	.39	.51	.82	.76
Usage	.28	.25	.60	.44
Maps	.53	.19	.70	.44
Graphs	.42	.34	.65	.44
References	.29	.18	.64	.41
CTBS Oct. - May	N = 128	N = 61	N = 142	N = 106
Vocabulary	.34	.42	.77	.68
Comprehension	.49	.56	.89	.51
Mechanics	.61	.54	1.02	1.05
Expression	.46	.53	.71	.69
Spelling	.49	.68	.71	.98
Study Skills	.46	.37	.68	.67

and unskilled. (See Appendix IV and Page 20 of Procedures for definitions of these terms)

Race--two levels, black and white

Ability--three levels, IQ less than 90, IQ from 90 through 110 and IQ above 110 as scored on the February administration of OLMAT or, in the absence of this score, as scored on the October administration.

Multivariate tests yielded one significant interaction with experimental condition ($p = .018$). This interaction was with ability level as defined above. Univariate tests of significance showed the phenomenon to be most pronounced for the ITBS variables Reading and Capitalization. Inspection of cell means yielded the conclusion that high ability students in the experimental group had disproportionately high gains. This outcome supports teacher contentions that the higher ability students seemed to profit most from the IRSS materials. At the same time, it shows the effect of observed misapplication of the materials with low ability students as noted at other points in this report (see Pages 47 - 50).

G. E. mean ITBS gain scores by race and experimental condition are shown in Table 5 and discussed on Pages 45 and 46 under Summary (Section 3).

CTBS Results

Analyses similiar to those for ITBS scores were performed for those from the CTBS, again excluding mathematics subtest scores. Reading Vocabulary and Comprehension scores formed the basis for one analysis. The other involved the subtests Spelling, Mechanics, Expression and Study Skills.

Neither multivariate analysis of covariance resulted in a significant F ratio associated with the experimental condition factors. However, one univariate test was significant. In this case, the Study Skills subtest, the adjusted mean for the comparison group was higher. Without regard to significance, the comparison group was favored on four adjusted CTBS means and the experimental on two, namely the two reading subtests (see Table 3). G. E. means are shown in Table 4.

Gain scores by ability, race and occupational groups for CTBS were analyzed. Analysis of these scores in a manner similar to that described above for the ITBS was undertaken to determine the significance of gain score interaction effects between experimental condition and successively, race, ability and father's occupation. As for the ITBS the only significant interaction with experimental condition involved ability ($p = .024$). High ability students had proportionately much higher gain scores under the experimental condition. This phenomenon was most pronounced for the CTBS Reading Comprehension subtest.

CTBS results are not surprising since the CTBS had been used for several years in the county and instruction or goals were probably geared to it, advertently or inadvertently especially with regard to the reading subtest. Goolsby (1971) presented evidence of a similar condition and alluded to the appropriateness of subtests when outcomes are specific, well defined or even long term as measured by a given subtest.

G.E. mean CTBS gain scores by race and experimental condition are shown in Table 5 and discussed on Pages 45 and 46 under Summary (Section 3).

BRI Results

The first administration of the BRI was somewhat unsuccessful. Confronted with a manual which is less than explicit about how to record scores, many teachers were unable to report adequate data after administering Form A in February. Initial means and standard deviations reported in Table 4 therefore cover less than the entire sample tested and are probably not representative for either the experimental or comparison groups. Several entire classes are left out, mostly "low" groups. Project personnel instructed teachers in scoring procedures, and the second administration was more uniform. Scores recorded for subtests other than Potential Level and Instructional Level are the numbers of correct responses. Even though scoring of the initial administration was incomplete for many students, teachers generally felt that the test was very helpful in providing insights into students' strengths and weaknesses.

Because the first administration scoring was so incomplete, ITBS Vocabulary and Reading scores were adopted as covariates along with IQ for a multivariate analysis of covariance. Criteria for this analysis are:

1) Potential level
2) Instructional level

Scaled as follows: 1 = preprimary, 2 = primary, 3 = 1st grade, 4 = 2nd grade--1st semester, 5 = 2nd grade--2nd semester, etc.

3)	Consonants	Sum of single consonants, blends, and digraphs scores
4)	Vowels	Sum of Single Vowels and Vowel Combinations scores
5)	Rhyming words	Number of correct responses
6)	Syllabication	Sum of number and accent scores
7)	Nonsense words	Number of correct responses

Tables 6A and 6B show the outcomes of this analysis. The multivariate test for effect of experimental condition is marginally significant ($p = .055$). Inspection of cell means and univariate tests shows that there is even less variance in Instructional Level scores than one might reasonably expect and that on the Vowels, Nonsense Words, and Rhyming Words the experimental group is heavily favored. As in other analyses, girls' scores are generally significantly higher than those of boys. Strong interaction occurs between sex and experimental condition in the case of the variable, Nonsense Words. Boys did much better than girls in the experimental classes and this situation was reversed in the comparison group.

No plausible explanation has been advanced to account for this interaction, nor is there any really plausible basis for the superiority of the experimental group on Vowels, Rhyming Words (a vowel related test) or Nonsense Words. Since special training for the experimental groups was largely devoted to a more global, "cognitive" approach to reading instruction, the observed outcomes were not necessarily expected. Certainly comparison groups were not taught reading to the exclusion of learning vowel sounds. Further, the experimental treatment should have affected Instructional Level scores if it is at all related to what is measured by the BRI.

TABLE 6A

Multivariate Analysis of Covariance Using Wilks' Lambda Criterion and Rao's Approximation: Botel Reading Inventory Raw and Composite Scores

	Means (Standard Deviations)			
	Experimental		Comparison	
Criteria	Male N = 138	Female N = 125	Male N = 73	Female N = 74
Instructional Level[a]	5.0(2.6)	5.9(2.5)	5.0(2.8)	6.2(2.3)
Potential Level[a]	5.7(2.8)	6.5(2.6)	5.5(2.9)	6.8(2.6)
Consonants[b]	29.8(10.1)	31.8(8.5)	28.5(11.5)	31.7(9.3)
Vowels[c]	8.9(5.1)	10.2(5.0)	7.9(5.1)	10.1(4.8)
Syllabication[d]	12.4(4.5)	13.2(4.5)	12.1(4.7)	12.7(4.2)
Nonsense Words	5.9(6.0)	4.3(4.9)	3.5(4.5)	5.0(5.0)
Rhyming Words	2.8(1.4)	3.1(1.1)	2.3(1.5)	3.0(1.4)
Covariates				
ITBS-Vocabulary 10-70	2.4(0.9)	2.6(0.9)	2.5(0.7)	2.7(0.9)
ITBS-Reading 10-70	2.2(1.0)	2.4(0.9)	2.4(0.9)	2.6(0.8)
Otis-Lennon IQ 2-71	93.4(18.4)	93.6(17.7)	91.2(14.5)	94.3(14.0)

MANCOVA	F	df	p less than
Experimental Conditions	1.984	7,397	.055
Sex	4.894	7,397	.001
Sex X Exp. Cond.	1.867	7,397	.073

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[a] Scaled as follows: 1 = preprimary, 2 = primary, 3 = 1st grade, 4 = 2nd grade-1st semester, 5 = 2nd grade-2nd semenster, etc.

[b] Sum of Consonants, Blends and Digraphs scores

[c] Sum of Vowels-1 and Vowels-2

[d] Sum of Syllabication-1 and Syllabication-2

TABLE 6B

Univariate Criterion Analyses From MANCOVA For Botel Reading Inventory

(See Table 6A)

	Experimental Condition			Sex			Sex X Experimental Condition	
	df = 1,403			df = 1,403			df = 1,403	
Criterion	F	p less than	Higher Mean	F	p less than	Higher Mean	F	p less than
Instructional Level[a]	.002	.964	Exp.	16.900	.001	Female	.026	.870
Potential Level[a]	.009	.920	Comp.	11.009	.001	Female	.274	.600
Consonants[b]	1.767	.184	Exp.	3.750	.053	Female	.113	.763
Vowels[c]	4.362	.037	Exp.	7.765	.005	Female	.671	.413
Syllabication[d]	1.670	.196	Exp.	1.107	.293	Female	.502	.479
Nonsense Words	5.541	.019	Exp.	3.221	.073	Female	9.100	.002
Rhyming Words	6.568	.010	Exp.	7.691	.005	Female	.863	.353

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a,b,c,d See corresponding footnotes to Table 6A after adjustment for covariates.

To test hypotheses about interactions between experimental condition and race, father's occupation and ability, vectors of ten May BRI raw scores were analyzed by multivariate analysis of variance designs similar to those described for ITBS change scores. Change score analysis was not feasible in view of the large number of missing data for the February BRI. One strong interaction was noted ($p < .001$), to the effect that black students had much higher scores under the comparison treatment for the tests, Single Consonants, Vowel Combinations and Syllabication.* In contrast black students' performance was significantly better under the experimental condition for Nonsense Words.

Like others for the BRI, this result has no plausible explanation. When considered along with the unexplainable interaction between sex and experimental condition, the extreme lack of between-group variation for Instructional Level scores, and the strange configuration of significant univariate F ratios for the experimental condition factor, it may be said that the BRI raises more questions than it answers. It may be that the scores of the BRI simply lack validity (viewed as a statistical relationship) with respect to the other scores of this study. There is evidence to this effect in Section 4. Another problem may be lack of uniformity of administration. BRI instructions for administration are almost as sketchy as those for recording scores.

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*Syllabication-Number and Syllabication-Accent were added to produce a single score, thus bringing the total of separate BRI scores to ten, the capacity of the computer program for this analysis.

Intragroup differences in administration may well have developed inasmuch as project personnel had almost no control over classroom testing procedures.

Interaction Between Sex and Father's Occupation

Change score analyses for the ITBS and CTBS were done primarily to investigate interactions with experimental condition. However, in both the ITBS and CTBS analyses with father's occupation as a factor, a strong interaction between sex and father's occupation was noted. In effect, it suggests that sons of professionally employed fathers do not achieve as well as might be expected. These boys apparently have no higher achievement on the average than sons of father's classified as "skilled." In contrast daughters of professionally employed fathers have substantially higher achievement on the average than those of "skilled" fathers. This phenomenon was particularly apparent for the ITBS variables, Reading and Capitalization, and for the CTBS variable, Mechanics. It was prevalent in both the experimental and comparison groups. A similar interaction was noted for first grade students in an earlier study (Goolsby and Frary, 1969) but without differentiation according to sex. In this case both boys and girls from "professional" homes did not do as well as might have been expected in a conventional classroom setting. Inspection of means in this case suggests that boys' lack of performance influenced this outcome more than that of girls, but not to the level of statistical significance.

Outcomes of the kinds just reviewed suggest various interpretations. The lack of expected performance of professional fathers' sons may be simply developmental. On the other hand, socialization of these boys may be at variance with classroom approaches commonly adopted. Relationships between boys and their mothers may be different in different socioeconomic settings, and these differences may carry over to the usually female teacher. In any event, the need for treatment changes is suggested with respect to boys from "professional" homes.

Summary

The main academic goal of the project was reading improvement. Even discounting the BRI results, there is substantial evidence that the performance of the experimental group exceeded that of the comparison. The key score here is ITBS Reading, the most valid measure in view of the theory base for development of the experimental materials. On this variable there is a clear superiority for the experimental group.

Considering all tests given (see Table 3), the experimental group's performance exceeded that of the comparison group (after adjustment for covariates) in 17 of 22 cases. Such an outcome would occur by chance fewer than one time in 100 (binomial probability). A more binding interpretation may be gained by observing the pattern of Table 3 and recalling the reservations expressed regarding the significance of the BRI scores. It is clear that the experimental group's superiority is most apparent as measured by the ITBS, and this outcome attests to the efficiency of the experimental treatment.

At this point, especially with regard to the last statement, the reader should be aware that the authors do not view standardized test results apart from the kind of treatment used to influence scores thereon. The entire project was designed to orient teachers as to the content of the ITBS and how it measures achievement. Children were taught what to look for in reading questions about IRSS materials in terms of the question hierarchy of the ITBS (details, purposes, organization, evaluation). Then, accepting that higher ITBS performance is a desirable and sufficient educational goal, instruction can be efficiently organized to achieve it. This situation should not be confused with ones in which unethical performance contractors have coached students using questions from actual achievement tests (or ones very similar to these).

In summary it may be said that the combined effect of the following was highly successful: (a) Teachers taking standardized tests, most important the ITBS, (b) Teachers ranking students according to expected standardized test scores (ITBS) and learning actual rankings, (c) Students using innovative materials related in structure to the criterion tests (ITBS).

While there is little to report for CTBS scores in terms of significant differences, performance of the experimental group certainly did not suffer. It should also be noted that the CTBS had been used for some time in Henry County prior to the project, and teachers in the comparison group may have unconsciously modeled instruction toward the outcomes defined by the CTBS as those in the experimental group were trained to do with respect to the ITBS.

Inspection of Table 5 permits placing in perspective the results reported earlier. While there was no statistically significant interaction between race and experimental condition, black gains under the experimental condition are substantially greater proportionately than white for three ITBS subtests when compared with comparison black and white gains. Specifically, on ITBS Vocabulary black gain scores under the experimental condition are almost double those from the comparison black group. In contrast, the white mean Vocabulary gain score under experimental condition exceed the corresponding white comparison score by only 29 percent. Similar outcomes prevail for ITBS Spelling and Maps. No such differences may be noted for the CTBS subtests.

Further perspective may be gained by noting the magnitude of the mean differences reported in Table 5. The testing interval was about seven months. Therefore mean gains of about .7 are what might be considered reasonable for samples from fairly representative school situations. All the white, experimental mean gains are near or above this point. The comparison, white mean gains for ITBS Reading, Vocabulary, Usage and Maps and CTBS Comprehension depart from this standard substantially.

Black students' mean gain score magnitudes deserve consideration also. While they are significantly lower than those for white students in most cases, there are exceptions. Experimental black students' mean ITBS Vocabulary gains almost match those of experimental whites and exceed those of comparison whites. ITBS Maps and Reading mean gains for experimental blacks also exceed those for comparison whites.

It should be recalled at this point that the experimental treatment was structured according to the learning model on which the ITBS is based. Further, teacher treatment was centered around inducing an internalization of the process and content inherent in the ITBS. The Table 5 outcomes just reviewed certainly support the overall effectiveness of the experimental program beyond the results presented earlier in this chapter. This outcome is especially prominent when the essentially inconclusive CTBS results are compared with those of the ITBS.

More important is the evidence in Table 5 to the effect that low gains by black students (mostly from deprived backgrounds) need not be expected in every circumstance. The ITBS Vocabulary, Reading, Spelling, and Maps mean gains for black experimental students are substantial and should point the way towards further improvement for this group in Henry County.

In the total picture, absolute differences in gain scores between groups were relatively slight. These differences may well increase as the practices begun experimentally for 1970-71 are stabilized and improved.

Section 4: Subsidiary Results

Individualized Reading Materials Evaluation

The major part of the IRSS program, Book P (Sites, Routes, and Boundaries), had been tested and analyzed prior to the Henry County project. The pilot project was carried out with a north Georgia population similar to the Henry County population. Item analyses of the IRSS passages were made and revision of the materials undertaken. The program had, therefore, been subjected to one developmental-functional critique.

Evaluation of the IRSS program in the present study is based upon a randomly selected sample of 99 subjects from the experimental group. The randomly selected sample constituted somewhat more than 6000 passages read and scored. A similar analysis of the total experimental group would have necessitated processing approximately 30,000 passages.

The mean proportion of correct responses and standard deviations for the passages was computed (Appendix VIII). The standard deviation of the proportion of responses correct per passage was consistently about .25. It was anticipated that this variability would reflect the range of reading abilities of students on difficult passages but be reduced considerably on less difficult passages. Such was not the case, probably for reasons discussed hereafter. Also, correlation coefficients between the passage score and ITBS Reading and Vocabulary and ITBS Maps scores for the subjects in the sample were computed. Those data suggest several conclusions.

Approximately 17 passages have a mean proportion correct score low enough (less than .6) to suggest that a substantial proportion of subjects marked their answers randomly. This result can only lead to the conclusion that in many instances the passage tests were not correctly administered. The program procedure of requiring students to reread passages a second and third time in order to attain a score no less than the 60 percent criterion level was evidently not emphasized by the teachers. No scores below that level should have been recorded. A student not able to attain the criterion score by the third reading was not to be permitted to continue without either listening or individual assistance.

The low means are believed by the authors to result from lack of proper supervision and lack of understanding of directions by the students, especially those in the lower ability groups. This situation was compounded by inadequate teacher monitoring of the student reading profiles, a vital component for evaluation of progress to be used by the teacher.

The relationship between passage scores and scores in the ITBS Reading, Vocabulary, and Maps result in a generally consistent pattern of correspondence. However, two exceptions are evident. First, the relationships were reduced considerably in the cases where guessing occurred. Second, the relationships increased as the proportion of poorer readers in the sample was reduced. Such reductions occurred as the number of omissions increased (Appendix VIII). The increased relationships also indicate the reduced instances of guessing expected from better readers.

The lower relationships between scores on map activities in the program and ITBS Reading and Vocabulary is indicative of the independence of language functions involved. These scores are more closely related to performance on the ITBS Maps subtest (Appendix VIII). The significant difference between the experimental and comparison groups on the ITBS Maps subtest is evidence of the favorable map reading effect of the treatment. Further, the high proportion correct on those activities indicates the relatively small amount of chance marking of responses. A rather high incidence of omissions indicates that a large proportion of students did not complete the Map activities. This occurrence must reflect misdirection of students since much larger proportions of students completed adjacent passage tests. Another cause for omissions reported in Appendix VIII is misrecording of passage numbers on the student reading record. (The computational program counted as omissions scores higher than the total number of items on the test for a given passage.) Such occurrences are further evidence that the program was not monitored within the guidelines established by the project.

One final consideration rests with the stage of development of the IRSS program. Certainly, some inadequacies exist in the program which contribute to deficiencies evident from analysis. However, the absence of cooperation in administering the program at the classroom level is most obvious. This conclusion is not attributed to any individual's observations but derives from the data reviewed above. Nevertheless, observation by individuals disclosed that quality of

cooperation and commitment to experimentally assisting children in learning to read had a considerable range, probably the result of variation in both attitude and ability of classroom personnel.

Experimental Teacher Evaluation of the Individualized Reading Program

An independent evaluator made the following report on the teacher evaluation of the individualized reading program:

> "A copy of the evaluation form, 'Teacher Responses Related to the Instructional Programs,' was given to each of the teachers in the experimental program. Only ten teachers completed and returned the form. A summary of their responses is given in Table 7.
>
> In addition, the teachers who returned the form wrote comments, which are summarized as follows:
>
> The program was very effective for the average and above-average students. The children enjoyed the program and found the materials very interesting. They learned the importance of listening and improved in ability to follow directions in silent reading. Outstanding values of the program were increased comprehension and more independent reading. These values were carried over to other subject areas. The children enjoyed the listening aids and liked working independently.
>
> The below-average students found the reading level too difficult. Some lost interest and did not attempt to read with the tape. Therefore, these students did not increase their reading skills.
>
> Reading materials should be provided at different levels. More pictures might be used in order to maintain interest. The program could be used along with a basic reader and a thorough course in phonics. There is a need for a teacher aide to assist the low-ability children in scoring their work. The tapes could be improved to make them of more professional quality.

TABLE 7

Summary of Ten Teachers' Responses Related
to the Instructional Program

	Item	Doesn't Apply	Ineffective	Somewhat Effective	Effective	Very Effective	No Response
1.	Value of program in furthering individualized instruction.	0	2	5	1	1	1
2.	Increasing interest of pupil in reading.	0	5	4	0	1	0
3.	Overall effectiveness of the program	0	4	3	3	0	0
4.	Decreasing the number of discipline problems	2	3	1	2	1	1
5.	Staff development in organizing instructional program	1	2	2	5	0	0
6.	Staff development in individualized reading and diagnostic techniques	0	2	2	6	0	0
7.	Staff development in developing materials	1	2	2	5	0	0

A group of about five to seven teachers submitted a self-prepared report of group consensus. This report is reproduced below:

> The reading research program has been for the benefit of the teachers. It has taught the teachers how to give the different tests and score them but it did not give them the opportunity to use the results as a teaching tool.
>
> The program has been poorly planned and the communication between the principal parties has been very poor.
>
> The program has benefited the children who could read but has not been a good educational device for the pupils with reading problems.
>
> The children have become bored and feel that they are being tested daily rather than developing a love for reading.
>
> The program should be well organized and gone over with all participating personnel.
>
> The Botel test should be given during the first two weeks of school. This will help with evaluation and placement of pupils.
>
> The material developing the subject matter should be on different levels according to the reading abilities. It should gradually progress from easy to more difficult passages.
>
> There should be a variety in presentation of materials.
>
> Materials should be proof-read so that the number of typographical errors can be reduced.
>
> The tapes should be more professional with no background interference.

Interspersed among the comments on the questionnaire form and in the above summary are statements that indicate antagonism on the part of some of the teachers to the program. While the sample is too small to analyze statistically, it is easy to see that the more negative responses recorded in Table 7 occurred on the same copies of the questionnaire form with comments which show that these same teachers were

> antagonized by certain parts of the program, especially the frequent testing. The teachers apparently did not differentiate between testing which was an integral part of the program and the testing which was necessary in order to evaluate the program. Also, some teachers expressed adamant opposition to the testing of the teachers themselves."

Without doubt, the summary of teacher reaction just presented fails to capture every aspect of this phenomenon. In total, expressions of opinion by teachers regarding the program ranged from highly complimentary to very negative and it is impossible to convey all of these with respect to the many dimensions of the program to which they apply. Nevertheless, occasionally a comment is so revealing that it is worthwhile to consider it individually. One teacher wrote:

> "I do not think this program has helped the very slow children. Most of them didn't even read the material, but just marked the answer sheets at random."

The point here is that teachers were instructed and admonished repeatedly to the effect that random guessing should not be accepted as a student behavior. Both orally and in writing, teachers were instructed to have students reread or relisten to any passage on which the score was less than 60 percent. If after three attempts the score was still less than 60 percent, the teacher was to work individually with the student until the problem was overcome. Of course, this strategy may not be effective in all cases. However, this is not the complaint of the teacher quoted above. Apparently he or she reported what was model behavior for children in his or her class and in some way blames the materials or the program for the problems.

In fairness, it should be noted that the teacher just quoted probably had one of the "low" groups. It is easy to understand that there would be many more "problem" children in such a group and that the general level of difficulties might obscure the teacher's perspective. In fact, the materials were not designed for homogeneous groups. Individualization naturally works better when the students are dispersed along a large range of materials, thus alleviating materials shortages. Also, the number of "problem" children per class is lower and the teacher is more able to work individually with children as needed. Nevertheless, the materials were tried out with homogeneous groups in the first 30 day phase of the program. The difficulties which led the project director to recommend strictly random grouping at two levels (see Page 19) for the second phase of the project were frequently reflected in teacher comments. Nevertheless, homogeneous grouping was retained.

Results of Teacher Testing

In order to help the teachers improve their ability to interpret the test scores of their students, the teachers, both C and E, were given tests in October and again in May. There were seven black and fifteen white classroom teachers and six reading specialists (as defined on Page 13). The number of scores on the instruments in Table 8 varies for reasons of absence and time considerations for makeup testing. The six reading "specialists" scored at the upper part of each of the distributions.

Teachers were extremely concerned and seemed quite threatened after they had responded to the Nelson-Denny and the Reading and and Vocabulary ITBS even though their scores were known only to themselves. There was finally a confrontation and their contention seemed to be that it was unnecessary since they were qualified and experienced professionals. Since many apparently did not understand the necessity for the testing, the facts were presented concerning the great range and low median of their scores. At that point most teachers were greatly surprised and verbalized that they understood the need for testing. The testing and their "expected" ranking of students are to be viewed as definite treatments. Some of the lower scoring teachers did, in fact, ask the administration for help in their respective weak areas. The data presented in Table 8 indicated that at least 40 percent of teachers must have substantial training to be effective (accountable).

Table 8 gives the means and ranges of scores of the teachers on the ITBS and Nelson-Denny Reading Test, different forms of which were given in October 1970 and in May 1971. It can be seen that while some of the teachers scored at the upper limits of the tests, there were some teachers who scored at the fourth grade level on reading and on arithmetic. Even after removing the extreme scores and considering only the middle 75 percent of the scores, there were some teachers who scored only as well as an average sixth grader. It should be pointed out that the arithmetic test did not include any algebra or geometry; it was only arithmetic that would be encountered through eighth grade.

TABLE 8

Teacher Characteristics: Grade Equivalent Scores
on ITBS and Nelson-Denny and Derived IQ for Mental Ability

	N	No. Scoring Chance Level	Mean	Range	75 Percentile Range
ITBS Form 3, 8th Grade (October 1970)					
Vocabulary	27	0	10.5	6.8-12.9	8.5-12.5
Reading	27	6	8.2	3.7-12.4	6.5-10.8
Arithmetic Concept	25	10	8.4	4.2-12.6	4.5-11.3
Arithmetic Problems	25	5	9.2	5.1-12.4	6.5-11.7
ITBS Form 4, 8th Grade (May 1971)					
Vocabulary	24	1	10.1	4.1-12.9	7.8-12.3
Reading	24	1	9.1	4.3-12.7	6.4-12.0
Arithmetic Concepts	24	8	9.2	4.2-12.1	6.0-11.9
Arithmetic Problems	24	5	9.5	4.1-12.7	6.2-12.0
Nelson-Denny Form A (October 1970)					
Vocabulary	28	5	12.4	7.7-14.0	10.4-14.0
Comprehension	28	1	10.6	7.0-13.8	7.9-13.8
Rate	28		11.3	7.0-14.0	8.4-14.0
Nelson-Denny Form B (May 1971)					
Vocabulary	23	4	12.1	7.0-14.0	9.0-14.0
Comprehension	23	4	8.3	7.0-11.0	7.0-10.3
Rate	23		12.6	7.0-14.0	10.0-14.0
OLMAT IQ Score (Advanced Level)	28	4	98	73-129	85-120

The scores on the Nelson-Denny Test are higher than on the ITBS simply because the Nelson-Denny was normed for adults whereas the ITBS was normed for children. Some of the teachers scored at the lower limit, grade seven, on the Nelson-Denny.

It might be pointed out that all of these teachers are college graduates and have been certified by the State of Georgia. However, these test scores indicate that for some of the teachers something was lacking in their training. Also, the number of teachers who scored below 100 derived IQ for 18-year-old norms (top-level norms for OLMAT) on the Otis Lennon Mental Ability Test is not particularly surprising. The scores as presented in Table 8 were predicted and are not considered significantly different from the general population of elementary and secondary teachers. One can observe the number who earned chance score on each test, i.e., those who have no knowledge in the area measured as defined by each test. There was a significant number just above chance score on the various tests.

Results of Parent Questionnaire

Copies of the "Henry County School Questionnaire" (see Appendix V) were given to the parents of approximately 400 children in the program. The copies were completed and returned for 291 children, 37 percent of them black and 63 percent white. This ratio is close to the black-white ratio in the experimental classes.

Although a slightly higher percentage of females than males of both races returned the form, there appears to be no substantial difference in responses according to sex of the children in the program.

Approximately 81 percent of the black children and 77 percent of the white children had attended a Henry County school the previous year.

The survey revealed that more white parents than black parents claim to know the teachers of their children. Only 64 percent of the black parents report that they know one or more of their child's teachers, whereas 84 percent of white parents do so.

About 90 percent of each race feel that school books and other materials provide a good cultural background for the children.

The results of the other items of the questionnaire are given in Table 9.

It can be readily seen from the results in Table 9 that a greater percent of black parents than white have a positive attitude toward the changes in the schools. Nevertheless, it is clear that only a minority of white parents display generally negative attitudes toward the schools. This claim is based on the assumption that white

TABLE 9

Responses of Parents to Opinion Survey:

Per Cent Black and Per Cent White Giving Each Response

Items	Better		Worse		No Change		No Response	
	Black	White	Black	White	Black	White	Black	White
Child's attitude toward school	62	30	10	20	26	49	2	1
Child's vocabulary	73	64	2	10	19	25	6	1
Child acquiring better understanding of people of other races	66	33	3	13	23	49	8	5
Efficiency of Henry County Schools	52	22	4	31	26	26	18	21
Quality of education	73	36	2	21	19	34	6	9
Cleanliness and upkeep of school buildings and grounds	52	25	6	20	27	38	15	17
Speed of instruction	44	29	12	17	22	29	22	25
How well PTA functions	18	7	3	10	7	12	72	71

non-responders failed to respond because of apathy rather than negativism. (Surely those with strong negative feelings would have taken advantage of the opportunity to express them.) The "hard core" minority of whites with negative attitudes was, in fact, an observable phenomenon in one of the experimental schools.

If one looks at the combined differences for the "Better" and "No Change" conditions by race, there seems little or no justification for claiming differences by race even for this limited number of questions. This outcome is supported in most other analyses by race in this report. In fact, the outcome is becoming more pervasive across studies. It is highly probable that differences in race are figments of ones imagination so far as public schools are concerned and one should concentrate on teacher education, educational technology, classroom instruction, and parent-school relationships.

A careful inspection of the "No Response" column of Table 8 definitely points to a lack of input about PTA functions. Also, a somewhat less severe condition seems to exist relative to instruction and school operations.

Relationships Between Behavioral, Academic Achievement and Socioeconomic Measures

A total of 56 variables entered this analysis. They are:

The first 28 items of the Student Affective Behavior Checklist* (Roberson, 1970)

Scores on the nine nonmathematics subtests of the ITBS, May administration

Scores on 11 subtests of the BRI, May administration

Experimental condition: Experimental or Comparison

Sex

Race

IQ: OLMAT, February administration

Number of siblings

Number of absences from school

Group level: Rated from one to six according to teacher's impressions. (Initial grouping procedures led to only three nominal levels--see Procedures, Page 20)

Father's occupational status: Three levels--professional, skilled and unskilled.

The question at hand is how to summarize the interrelationships between such a large and varied collection of measures. The statistical procedure known as factor analysis serves this purpose. It

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*The final eight items of the SABC are not scalable for use in this analysis. To provide a meaningful analysis of their relationships to other variables of the study is beyond the immediate resources of the project.

displays groups or clusters of variables which tend to be interrelated and shows the strength of the relationship of each variable to a pseudo-variable, or factor, representative of the group as a whole. Unlike other methods, such as cluster analysis, factor analysis displays the situation in which a variable is related to more than one group. Consider the variable, race, in the above list. Each student's vector of scores contained a one for black or a two for white. The race to which children belong might have been expected to be related to behaviors or academic outcomes. If so, the "scores" for race would be correlated with the factor representing the behaviors or academic outcomes.

In more technical terms, the intercorrelation matrix for the 56 variables of this study entered a principal components extraction (unities placed in the diagonal) to the point at which eigenvalues of less than unity were encountered. For the eleven factors thus extracted, a varimax rotation was performed. However, the results are informative only to a very limited extent, and for this reason the rotated factor matrix is not displayed. The eleven factors extracted, which account for 69 percent of the total variance, may be described as follows:

Factor 1--Academic achievement as measured by ITBS. All ITBS variables loaded heavily on this factor along with IQ and instructional group. Some of the BRI variables also loaded on this factor substantially, specifically Instructional Level, Potential Level, Single Vowels, Vowel Combinations and Nonsense Words.

Factor 2--Reading achievement as measured by the BRI. All BRI variables loaded heavily on this factor.

Factor 3--Behavior as defined along an aggressive-passive continuum. Items 5, 6, 7, 10 through 13, 15, and 19 through 28 of the SABC load heavily on this factor.

Factor 4--Behavior related to conformity, leadership, and responsibility. Items 4, 7, and 14 through 17 of the SABC loaded heavily on this factor.

Factor 5--Behavior related to classroom participation through speaking in answer to questions, etc. Items 1, 2, 3 and 6 of the SABC load heavily on this factor.

Factor 6--Behavior related to bringing materials to school or perceived popularity of the student. Items 8, 9 and 18 of the SABC loaded heavily on this factor.

Factor 7--Behavior defined in terms of respect for authority. Items 10, 18 and 24 of the SABC loaded heavily on this factor.

Factor 8--Siblings, race and father's occupation. The tendency for black children to have more siblings and fathers of lower occupational status resulted in this factor.

Factor 9--Experimental Condition. No other variables loaded on this factor to an extent that might be considered significant.

Factor 10--Number of absences. Items 28 of the SABC (which concerns absences) also loaded on this factor.

Factor 11--Sex. The variable Nonsense Words from BRI loaded heavily on this variable.

In total, these results are not very informative in that most of them are obvious or were known. For example, Table 3 shows that the "superiority" of girls is reversed for Nonsense Words of the BRI, and the factor analysis shows that success on this subtest is substantially related to being a boy. It had been hoped that the variables race, father's occupation, siblings, sex and experimental condition might display loading patterns which would permit at least tentative conclusions not previously apparent. Further, it had been hoped the behavior variables might be related to academic achievement in some ways which might explain outcomes of the present study or suggest new strategies for continuation of the project.

A major reason for the disappointing nature of this latter outcome may be that the behavior scores represent teachers' impressions or interpretations of behavior rather than scores based on some more objective criterion. Certain subtle evidences of teacher fallability may be observed. For example, the SABC item regarding leadership qualities (No. 15) loads positively on two factors. One of these has positive loadings from items describing unpleasant behavior such as quarrelsomeness and disrespect for authority. The other has positive loadings from items describing courtesy and acceptance of group decisions. This inconsistency illustrates the weakness of using checklists when raters are relatively untrained and may have some emotional involvement with the subjects they are rating.

In summary, it may be said that the groups of variables entering this analysis were for the most part more related among themselves than to members of other groups. This finding does not detract from the importance of the interrelationships between behavioral, achievement and socioeconomic variables, but suggests the need for methodological refinements in future studies.

Section 5: Implications and Recommendations

While the research reported herein was funded for only one year, it may be that various phases of such a program may be retained in the Henry County School System or evaluated in other settings. Therefore, this section is presented in terms of evaluations and recommendations for an ongoing program to ameliorate instructional deficiencies.

The Main Effect of Use of Individualized Materials

From the results presented in Section 3, it is clear that the experimental materials (IRSS) and teacher treatment had a strong effect on achievement.

The main academic goal of the project was reading improvement. The key score here is ITBS Reading, the most valid measure in view of the theory base for development of the experimental materials. On this variable there is a clear superiority for the experimental group. The entire project was designed to orient teachers as to the content of the ITBS and how it measures achievement. Children were taught what to look for in reading questions about IRSS materials in terms of the question hierarchy of the ITBS (details, purposes, organization, and evaluation). Considering all tests given (see Table 3), the experimental group's performance exceeded that of the comparison group (after adjustment for covariates) in 17 of 22 cases. Such an outcome would occur by chance fewer than one time in 100 (binomial probability).

It is recommended that the use of the IRSS materials be continued in this and/or placed in other settings. Further, IRSS should be expanded: 1) upward and downward to be more inclusive of ability and reading achievement levels, 2) to cover the social science structure proposed by the producers of the materials, 3) to provide pre-reading and readiness training, 4) to provide limited alphabet and phonics at very low reading levels, 5) to provide more experiences in the form of activities, games, and so forth, 6) to provide listening at all levels and better listening procedures at very low reading levels.

It is further recommended that other individualized programs in areas such as mathematics and science be seriously considered.

Teacher Testing and Treatment

The results of teacher testing indicates that at least a third and probably forty to sixty percent of teachers are deficient in most of the instructional areas for which they have responsibility. Also, a significant number have less than average ability. The ability question does not seem to be as significant as competency in instructional areas. In view of the large numbers of teachers needed, one could justify many of very average ability, but incompetency in instructional areas is self-defeating. Performance contracting will soon replace incompetence.

It is highly recommended that teachers needing or requesting assistance to make them more effective be provided with formal

effective instruction, workshops, locally planned and supervised sensitivity sessions, and close supervision by principals and other supervisory personnel. Please recognize that all teachers do not need extensive or intensive treatment, retraining, or education.

It is further recommended that annual testing of all teachers be adopted according to the procedures utilized in this study for purposes of feedback to teachers, administrators, and the general public with respect to having a better notion of the quality of instruction and the school environment. Deficient teachers could be given period of time--say three years--during which they agree to reach a given level of performance as measured by an array of affective and cognitive measures.

Behavioral, Academic Achievement, and Socioeconomic Measures

The results of analyses presented in this study relative to these measures are not very informative in that most of them are obvious or well known. A major reason for the outcomes may be that the behavior scores represent teachers' impressions or interpretations of behavior rather than scores based on some more objective criterion.

More intensive efforts to determine the nature of and interrelationships between behavioral, achievement, and socioeconomic variables with methodological refinement is recommended. It is further recommended that teachers and other school personnel receive intensive and extensive formal course work and sensitivity training in objective measurement, human behavior, learning theory and practice, and interpersonal relationships.

Grouping

While grouping was not specifically investigated in the present study, its importance cannot be overlooked. The grouping prevailing throughout the year could well have accounted for some outcomes not being more sweepingly significant. The pitfalls of selection and grouping are enormous and complex, especially relative to achievement and ability.

It is recommended that no grouping be undertaken without expert assistance from measurement specialists and study of such documents as Ability Grouping: 1970 (Findley and Bryan, 1971).

Parent Questionnaire

The results of the parent questionnaire suggest very little ethnic background differences in the questions asked. There seems to be a need for more parent involvement in the schools.

It is recommended that more extensive and intensive questionnaires (see Mullen) be submitted to parents. It is judged that this could be done with neglegible negative effect and much to gain.

It is further recommended that efforts be substantially increased to give more and more positive feedback to parents concerning progress of pupils, especially the socioeconomically disadvantaged.

Black Gains

The evidence in Table 5 is to the effect that low gains by black students (mostly from deprived backgrounds) need not be expected. The ITBS Vocabulary, Reading, Spelling, and Maps mean gains for black experimental students are substantial and should point the way towards further improvement for this group in Henry County utilizing special programs like IRSS.

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Appendix I

ANSWER SHEET

Steps for the students: (1) Enter the passage number; (2) Read the passage; (3) Mark the answer spaces neatly.

Passage No. _____					
1	1	2	3	4	5
2	1	2	3	4	5
3	1	2	3	4	5
4	1	2	3	4	5
5	1	2	3	4	5
6	1	2	3	4	5
7	1	2	3	4	5
8	1	2	3	4	5
9	1	2	3	4	5
10	1	2	3	4	5
11	1	2	3	4	5
12	1	2	3	4	5
13	1	2	3	4	5
14	1	2	3	4	5
15	1	2	3	4	5
16	1	2	3	4	5
17	1	2	3	4	5
18	1	2	3	4	5

Passage No. _____					
1	1	2	3	4	5
2	1	2	3	4	5
3	1	2	3	4	5
4	1	2	3	4	5
5	1	2	3	4	5
6	1	2	3	4	5
7	1	2	3	4	5
8	1	2	3	4	5
9	1	2	3	4	5
10	1	2	3	4	5
11	1	2	3	4	5
12	1	2	3	4	5
13	1	2	3	4	5
14	1	2	3	4	5
15	1	2	3	4	5
16	1	2	3	4	5
17	1	2	3	4	5
18	1	2	3	4	5

Passage No. _____					
1	1	2	3	4	5
2	1	2	3	4	5
3	1	2	3	4	5
4	1	2	3	4	5
5	1	2	3	4	5
6	1	2	3	4	5
7	1	2	3	4	5
8	1	2	3	4	5
9	1	2	3	4	5
10	1	2	3	4	5
11	1	2	3	4	5
12	1	2	3	4	5
13	1	2	3	4	5
14	1	2	3	4	5
15	1	2	3	4	5
16	1	2	3	4	5
17	1	2	3	4	5
18	1	2	3	4	5

Passage No. _____					
1	1	2	3	4	5
2	1	2	3	4	5
3	1	2	3	4	5
4	1	2	3	4	5
5	1	2	3	4	5
6	1	2	3	4	5
7	1	2	3	4	5
8	1	2	3	4	5
9	1	2	3	4	5
10	1	2	3	4	5
11	1	2	3	4	5
12	1	2	3	4	5
13	1	2	3	4	5
14	1	2	3	4	5
15	1	2	3	4	5
16	1	2	3	4	5
17	1	2	3	4	5
18	1	2	3	4	5

Passage No. _____					
1	1	2	3	4	5
2	1	2	3	4	5
3	1	2	3	4	5
4	1	2	3	4	5
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6	1	2	3	4	5
7	1	2	3	4	5
8	1	2	3	4	5
9	1	2	3	4	5
10	1	2	3	4	5
11	1	2	3	4	5
12	1	2	3	4	5
13	1	2	3	4	5
14	1	2	3	4	5
15	1	2	3	4	5
16	1	2	3	4	5
17	1	2	3	4	5
18	1	2	3	4	5

Passage No. _____					
1	1	2	3	4	5
2	1	2	3	4	5
3	1	2	3	4	5
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7	1	2	3	4	5
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10	1	2	3	4	5
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12	1	2	3	4	5
13	1	2	3	4	5
14	1	2	3	4	5
15	1	2	3	4	5
16	1	2	3	4	5
17	1	2	3	4	5
18	1	2	3	4	5

Passage No. _____					
1	1	2	3	4	5
2	1	2	3	4	5
3	1	2	3	4	5
4	1	2	3	4	5
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9	1	2	3	4	5
10	1	2	3	4	5
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12	1	2	3	4	5
13	1	2	3	4	5
14	1	2	3	4	5
15	1	2	3	4	5
16	1	2	3	4	5
17	1	2	3	4	5
18	1	2	3	4	5

Passage No. _____					
1	1	2	3	4	5
2	1	2	3	4	5
3	1	2	3	4	5
4	1	2	3	4	5
5	1	2	3	4	5
6	1	2	3	4	5
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9	1	2	3	4	5
10	1	2	3	4	5
11	1	2	3	4	5
12	1	2	3	4	5
13	1	2	3	4	5
14	1	2	3	4	5
15	1	2	3	4	5
16	1	2	3	4	5
17	1	2	3	4	5
18	1	2	3	4	5

Make your marks dark and neat. Do <u>not</u> make extra marks. Mark only one answer space for each question. Neatly erase any extra marks. Hand in a neat answer sheet.

Appendix II

Student Profile Sheet

Tammie Distyan
NAME

02119
ID

NUMBER ANSWERED CORRECTLY	PASSAGE NUMBERS																	
	1255	1311	1312	1313	1314	1315	1321	1322	1323	1324	1325	1331	1332	1333	1334	1335	1341	1342
1																		
2																		
3																		
4																		
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18																		
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20																		

Appendix III

EVALUATION OF COGNITIVE DEVELOPMENT
AN OBSERVATIONAL TECHNIQUE
PRE-READING SKILLS

Project Director

Thomas M. Goolsby, Jr.

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Prepared for the Evaluation Division
Research and Development Center in Educational Stimulation
University of Georgia
Athens, Georgia
March 1969

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SYMPTOMS OF COGNITIVE DEVELOPMENT

Pre-Reading Skills

Symptoms
Directions
A. Follows simple directions--one step
1. Individual
2. Group
B. Follows multiple directions--two or three steps
1. Individual
2. Group
C. Retains delayed directions
Dramatizing
A. Spontaneous reacting to pictures or stories (observable reacting)
B. Finger play-attending
C. Finger play-participating--acting out
D. Role-playing
1. Spontaneous
2. Directed
E. Composes original story
Being Read to
A. Comes readily to reading
B. Listens to stories
1. With pictures
2. Without pictures
C. Asks to have reading done
D. Listens to stories
1. Short
2. Medium
3. Long
E. Gets book to retell story
Bookhandling
A. Book is to read
B. Orients book correctly
C. Knows where beginning is
D. Knows where ending is
E. Knows where title of book is
F. Knows where front of book is
G. Knows where back of book is
H. Turns pages correctly (R-L)
I. Knows where top of book is
J. Knows where bottom of book is
K. Left to right reading
L. Rows-return sweep
M. Observes relationship of text and pictures

Symptoms	
Persons and Names	
A. Recognizes oral names	
1. Self	
2. Others	
3. Absentees	
B. Recognizes written names	
1. Self	
2. Others (some)	
C. Writes names	
1. Self	
2. Others (some)	
D. Spells names (orally)	
1. Self	
2. Others	
Visual Discrimination	
A. Seeing simple likenesses and differences	
1. Knows likenesses	
2. Knows differences	
3. Discriminates between likenesses and differences	
B. Distinguishes letters from other forms (any)	
C. Distinguishing words	
1. First letters	
2. Letter order	
3. Whole words	
Auditory Discrimination	
A. Distinguishing familiar sounds	
B. Rhyming	
C. Letter sounds	
1. Beginning sounds	
2. End sounds	
Attempts to Read	
A. Relates to book--responds to pictures in books	
B. Attaches name he originates for book	
C. Reads (tells) stories from pictures in unfamiliar book	
D. Asks to read from certain book (even if not able)	
E. Learns words	
F. Spontaneously picks out words	
G. Asks help with reading	
H. Reads whenever asked to	
I. Resists interruptions of reading	
J. Helps others read	
K. Brings library or other books to read (himself)	

The research and development reported herein was performed pursuant to a contract with the United States Department of Health, Education, and Welfare, Office of Education, under the provisions of the Cooperative Research Program.

Center No. 5-0250 Contract No. OE 6-10-061

Appendix IV

CLASSIFICATION OF STUDENTS ACCORDING TO FATHER'S OCCUPATION
(OCCUPATION OF MOTHER OR GUARDIAN IF FATHER IS ABSENT)

The following guidelines are present with the realization that in some cases the teacher may have to make a judgment without full command of the facts regarding the occupational status of a parent or guardian. In such cases, no additional investigation should be made. Rather the teacher should classify the student according to her perception of the student's family background based on observation throughout the year. Because an occasional rating may therefore be inaccurate, it is essential that the finished rating sheet be shown only to personnel directly involved in processing the research findings. Of course, all responses will be held in strictest confidence and will be used only for group evaluation.

Classification 1: The student's father (or guardian if the father is absent) holds a professional or managerial position. Such jobs usually but not always require at least a bachelor's degree. Examples are:

Accountants (senior or CPA)
Clergymen
Commissioned officers
County agents
Engineers or scientists
Lawyers
Medical doctors
Nurses (registered)
Proprietors or managers of substantial businesses or farms
Teachers

If in doubt as to whether a person belongs in this classification, the holding of a bachelor's degree is the best criterion on which to base the decision if this fact is known. If not, try to judge the level of association in the community. For example, a life insurance salesman who sells mainly large policies to the financially affluent segment of the community probably belongs in this classification. One who sells mainly small policies (perhaps on a weekly collection basis) would not.

Classification 2: The student's father (or guardian) holds a regular, full-time job which requires training, knowledge and skill but not at the college level. Examples are:

Agricultural specialists (not college trained)
Automobile mechanics or other skilled tradesmen
Bookkeepers
Clerical and related workers
Draftsmen

Police officers
Postmen
Practical nurses or other non-professional health therapists
Sales personnel in retail stores (if training and knowledge are required, but not lower level sales clerks)
Service personnel (barbers, beauticians, bartenders, cooks, but not lower level waiter or waitress positions)
Supervisory personnel for lower level workers (foremen, etc.)

Classification 3: The student's father (or guardian) holds a job (or jobs) which require only casual or short-term training. These jobs are usually of low prestige and relatively low paying. Examples are:

Agricultural workers (field hands, etc.)
Domestic workers (household servants)
Laborers (construction, etc.)
Laundry workers
Service and sales personnel in lower positions

If in doubt as to whether a job belongs in this category, the primary criteria are lack of any requirement for prior training, a short training period and little raise in pay following training.

Please mark the classification for each child in your class on the attached list.

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Appendix V

HENRY COUNTY SCHOOL QUESTIONNAIRE

DIRECTIONS:
A. Either or both parents or guardians may answer.
B. Check no more than one blank for each question.
C. Leave blank any question you cannot answer due to lack of information.
D. Do not put your name or other identifying information on this questionnaire.

1. Person(s) answering these questions. __ Mother (or Guardian) __ Father (or Guardian) __ Both Parents (or Guardians)

2. Is your third grader a boy or girl? __ Boy __ Girl

3. Was your third grader in Henry County Schools in the second grade? __ Yes __ No

4. What is your race? __ Black __ White

5. How has your child's attitude been toward school this year? __ Better __ Poorer __ No Change

6. How many of your child's teachers for this year do you know? __ All __ One __ Two __ None

7. Do you feel that school books and other materials help provide a good cultural background for your child? __ Yes __ No, give reason: _____

8. Has your child's vocabulary improved since September of this year? __ Better __ Poorer __ No change

9. Do you think your child is acquiring a better understanding of persons of other races? __ More __ Less __ No change

10. How would you rate the efficiency of the Henry County Schools this year? __ More __ Less __ No change

11. Do you think there has been a change in the overall quality of the education your child has been getting since September? __ Better __ Poorer __ No change

12. How would you rate the cleanliness or upkeep of school buildings and grounds this year? __ Better __ Worse __ No change

13. Do you think the speed of instruction has changed this year? __Class speeded up __ Class slowed down __ No change

14. How well do you think the PTA functions this year? __ Better __ Not as well __ No change __ Do not know

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Appendix VI

Center for Educational Improvement

Department of Educational Administration
College of Education
Athens, Georgia

DESEGREGATION QUESTIONNAIRE
(Developed by Dr. David J. Mullen, University of Georgia)

These are statements about the things you might wish would happen in this desegregated school or school system and your satisfaction with the things that do or do not happen.

As you read and think about these statements, please put a circle around the number in the column on the left-hand side of each statement which tells your preference for the statement. The following quotes are examples of the meanings of the preference terms:

<u>prefer not</u>	- "I don't like this to happen." - "I'd rather not have this."
<u>does not matter to me</u>	- "I do not know anything about this." - "It is none of my business." - "I could care less whether this happens or not."
<u>prefer</u>	- "I like this to happen." - "I want this."
<u>strongly prefer</u>	- "This is very important to me." - "I am very happy when this is done and just the opposite when it doesn't happen."

After indicating your preference reread the statement and decide how the situation as you prefer it or <u>not</u> prefer it is handled in this school or school system. Put a circle around the number in the column on the right-hand side of each statement which shows your satisfaction with the way the thing in the statement is handled in your school situation. In other words, you are comparing what you want on the left side with what you are getting on the right side. The following quotes are examples of the satisfaction terms:

<u>very dissatisfied</u>	- "It bothers me very much the way this is handled in this school." - "This is one of the situations I really would quickly change if I could."

TM 000 542

not satisfied - "I don't care for the way the situation is being handled in this school."
- "I like this to happen but it is not being handled right."

satisfied - "This is being handled pretty much as I want it handled."
- "It so seldom happens the way that I dislike that I am satisfied."

very satisfied - "This is exactly the way I prefer it to be in this school."
- "It couldn't be better even if I had planned it myself."

Below are two sample questions which we will go through together before you begin answering the other questions.

EXAMPLES

---

1 = Prefer Not.....
2 = Does Not Matter
3 = Prefer.....
4 = Strongly Prefer

1 = Very Dissatisfied
2 = Not Satisfied....
3 = Satisfied.....
4 = Very Satisfied...

A DESEGREGATED SCHOOL SITUATION IN WHICH

1 2 3 4	A.	The white pupils are all in separate classes from the black pupils.	1 2 3 4
1 2 3 4	B.	The teacher gives both the black and white pupils the marks which they actually deserve.	1 2 3 4

Sample Question A

Do you "prefer not" to have a desegregated school situation in which the white pupils are all in separate classes from the black pupils? or it "does not matter" to you that white and black pupils are all in separate classes? or you "prefer" white and black pupils to be in separate classes or you "strongly prefer" a desegregated school situation in which the white pupils are all in separate classes from the black pupils? Circle the number in the column on the left-hand side which indicates your preference about the situation just described in Example A.

Now then, in this school system are you very dissatisfied, not satisfied, satisfied, or very satisfied as to how you prefer a desegregated school situation in which the white pupils are all in separate classes from the black pupils and the way it actually happens. Put

a circle around the number in the column on the right-hand side which shows how satisfied or disatisfied you are in your particular situation.

Sample Question B

Do you "prefer not" or "doesn't it matter" to you, or do you "prefer" or "strongly prefer" to have a desegregated school situation in which the teacher gives both black and white pupils the marks which they actually deserve. Indicate your preference in this matter by putting a circle around the number in the column on the left-hand side which tells how you feel about a desegregated school situation in which the teacher gives marks to black and white students.

Now then in this school situation are you very satisfied, not satisfied, satisfied, or very satisfied as to how you prefer marks to be given and how they actually are given to black and white pupils. Put a circle around the number in the column on the right-hand side which shows how satisfied or dissatisfied you are about the way you prefer it and the way it is in this situation.

Any questions? Please turn the page and answer the remaining questions in the same way we have gone through the two sample questions. If you have any questions while you are going through the questionnaire, please raise your hand.

1 = Prefer Not.....
2 = Does Not Matter
3 = Prefer.....
4 = Strongly Prefer

1 = Very Dissatisfied
2 = Not Satisfied....
3 = Satisfied.....
4 = Very Satisfied...

A DESEGREGATED SCHOOL SITUATION

IN WHICH

1 2 3 4	1.	black and white pupils ride the same bus	1 2 3 4
1 2 3 4	2.	white and black pupils sit together on the bus	1 2 3 4
1 2 3 4	3.	black and white pupils are able to get along together on the bus	1 2 3 4
1 2 3 4	4.	bus drivers are able to help black and white pupils get along together	1 2 3 4
1 2 3 4	5.	some schools are located in black neighborhoods and some are located in white neighborhoods	1 2 3 4
1 2 3 4	6.	an effort has been made to clean up all schools and have good materials and rooms in every school	1 2 3 4
1 2 3 4	7.	white and black pupils are able to get along together in the halls	1 2 3 4
1 2 3 4	8.	black and white pupils are able to get along together in the classroom	1 2 3 4
1 2 3 4	9.	white and black pupils are able to get along together in the shower and locker room	1 2 3 4
1 2 3 4	10.	black and white pupils are able to mix in the cafeteria	1 2 3 4
1 2 3 4	11.	white and black pupils are able to obey the laws and school rules (no fighting, using drugs, stealing, breaking windows, etc.).	1 2 3 4
1 2 3 4	12.	black and white pupils are able to get along together to and from school	1 2 3 4
1 2 3 4	13.	school names, song, school colors, mascots, uniforms and other school symbols are "OK" to both white and black pupils	1 2 3 4
1 2 3 4	14.	school trophies and awards are "OK" to both black and white pupils	1 2 3 4

1 = Prefer Not.....
2 = Does Not Matter
3 = Prefer.....
4 = Strongly Prefer

1 = Very Dissatisfied
2 = Not Satisfied....
3 = Satisfied.....
4 = Very Satisfied...

A DESEGREGATED SCHOOL SITUATION

IN WHICH

1 2 3 4	15.	school clubs and special organizations are "OK" to both white and black pupils	1 2 3 4
1 2 3 4	16.	the P.T.A. and other grown-up directed school activities represent both races in a "fair" way	1 2 3 4
1 2 3 4	17.	there is a "fair" number of black teachers, principals, counselors, department heads, team teaching leaders, supervisors, coaches, etc.	1 2 3 4
1 2 3 4	18.	there is a "fair" number of white teachers, principals, counselors, department heads, team teaching leaders, supervisors, coaches, etc.	1 2 3 4
1 2 3 4	19.	white teachers, principals, counselors, department heads, team teaching leaders, supervisors, coaches, etc. are competent (are able to do their jobs)	1 2 3 4
1 2 3 4	20.	black teachers, principals, counselors, department heads, team teaching leaders, supervisors, coaches, etc. are competent (are able to do their jobs)	1 2 3 4
1 2 3 4	21.	there is a "fair" number of black bus drivers, cafeteria workers, secretaries, janitors, etc.	1 2 3 4
1 2 3 4	22.	there is a "fair" number of white bus drivers, cafeteria workers, secretaries, janitors, etc.	1 2 3 4
1 2 3 4	23.	black bus drivers, cafeteria workers, secretaries, janitors, etc. are competent (are able to do their jobs)	1 2 3 4
1 2 3 4	24.	white bus drivers, cafeteria workers, secretaries, janitors, etc., are competent (are able to do their jobs)	1 2 3 4
1 2 3 4	25.	special help is given to people who are not doing their jobs well	1 2 3 4

1 = Prefer Not.....
2 = Does Not Matter
3 = Prefer.....
4 = Strongly Prefer

1 = Very Dissatisfied
2 = Not Satisfied....
3 = Satisfied
4 = Very Satisfied

A DESEGREGATED SCHOOL SITUATION

IN WHICH

1 2 3 4	26.	white parents help their children want to get along with pupils of the other race	1 2 3 4
1 2 3 4	27.	black parents help their children want to get along with pupils of the other race	1 2 3 4
1 2 3 4	28.	there are chances to get to know more about people of the other race, and why they think, act, and speak the way they do	1 2 3 4
1 2 3 4	29.	there are chances to work under the direction of people of the other race	1 2 3 4
1 2 3 4	30.	there are chances to work with people of the other race	1 2 3 4
1 2 3 4	31.	people of one race will judge (evaluate) and treat people of the other race fairly	1 2 3 4
1 2 3 4	32.	people are seen as one group (not seen as black teachers or white teachers, black pupils or white pupils, etc.)	1 2 3 4
1 2 3 4	33.	attention is given to how people of the other race feel when things are said and done to them	1 2 3 4
1 2 3 4	34.	people try to do away with their racial prejudices	1 2 3 4
1 2 3 4	35.	there is a "fair" number of white pupils in almost every class	1 2 3 4
1 2 3 4	36.	there is a "fair" number of black pupils in almost every class	1 2 3 4
1 2 3 4	37.	doing well on achievement tests and other school tests is very important	1 2 3 4
1 2 3 4	38.	there are school programs which prepare pupils for getting a job when they finish high school	1 2 3 4
1 2 3 4	39.	there are special programs which help pupils speak so that they can be understood	1 2 3 4

1 = Prefer Not.....
2 = Doe Not Matter
3 = Pr r.....
4 = St gly Prefer

1 = Very Dissatisfied
2 = Not Satisfied....
3 = Satisfied
4 = Very Satisfied

A DESEGREGATED SCHOOL SITUATION

IN WHICH

1 2 3 4	40.	there are learning materials which show that the blacks are important in our country	1 2 3 4
1 2 3 4	41.	clubs and activities (bands, team sports, student government, cheerleaders, homecoming events, etc.) have some members of both races taking an active part	1 2 3 4
1 2 3 4	42.	clubs and activities have leaders from each race from time to time	1 2 3 4
1 2 3 4	43.	special recognition, awards, and honors are given to pupils of both races from time to time	1 2 3 4
1 2 3 4	44.	school social activities encourage members of both races to take an active part	1 2 3 4
1 2 3 4	45.	school social activities include pupils of both races in planning and arranging for the events	1 2 3 4
1 2 3 4	46.	some pupils, teachers, parents, school workers, community leaders, etc., of both races should be asked their opinions when decisions about racial matters which affect them, need to be made	1 2 3 4
1 2 3 4	47.	pupils, teachers, parents, school workers, community leaders, etc., are told about what is being done and planned concerning racial matters	1 2 3 4

CATEGORIES AND ITEMS
FOR THE
DESEGREGATION QUESTIONNAIRE

1.0 Transportation

Items 1 thru 4

1. black and white pupils ride the same bus
2. white and black pupils sit together on the bus
3. black and white pupils are able to get along together on the bus
4. bus drivers are able to help black and white pupils get along together

2.0 Facilities

Items 5 thru 6

5. some schools are located in black neighborhoods and some are located in white neighborhoods
6. an effort has been made to clean up all schools and have good materials and rooms in every school

3.0 Discipline

Items 7 thru 12

7. white and black pupils are able to get along together in the halls
8. black and white pupils are able to get along together in the classroom
9. white and black pupils are able to get along together in the shower and locker room
10. black and white pupils are able to mix in the cafeteria
11. white and black pupils are able to obey the laws and school rules (no fighting, using drugs, stealing, breaking windows, etc.).
12. black and white pupils are able to get along together to and from school

4.) Identification

Items 13 thru 16

13. school names, song, school colors, mascots, uniforms and other school symbols are "OK" to both white and black pupils
14. school trophies and awards are "OK" to both black and white pupils

15. school clubs and special organizations are "OK" to both white and black pupils
16. the P.T.A. and other grown-up directed school activities represent both races in a "fair" way

5.0 Personnel Matters

Items 17 thru 25

17. there is a "fair" number of black teachers, principals, counselors, department heads, team teaching leaders, supervisors, coaches, etc.
18. there is a "fair" number of white teachers, principals, counselors, department heads, team teaching leaders, supervisors, coaches, etc.
19. white teachers, principals, counselors, department heads, team teaching leaders, supervisors, coaches, etc., are competent (are able to do their jobs)
20. black teachers, principals, counselors, department heads, team teaching leaders, supervisors, coaches, etc., are competent (are able to do their jobs)
21. there is a "fair" number of black bus drivers, cafeteria workers, secretaries, janitors, etc.
22. there is a "fair" number of white bus drivers, cafeteria workers, secretaries, janitors, etc.
23. black bus drivers, cafeteria workers, secretaries, janitors, etc., are competent (are able to do their jobs)
24. white bus drivers, cafeteria workers, secretaries, janitors, etc., are competent (are able to do their jobs)
25. special help is given to people who are not doing their jobs well.

6.0 Interpersonal and Intergroup relations

Items 26 thru 34

26. white parents help their children want to get along with pupils of the other race
27. black parents help their children want to get along with pupils of the other race
28. there are chances to get to know more about people of the other race, and why they think, act, and speak the way they do
29. there are chances to work under the direction of people of the other race
30. there are chances to work with people of the other race
31. people of one race will judge (evaluate) and treat people of the other race fairly
32. people are seen as one group (not seen as black teachers or white teachers, black pupils or white pupils, etc.)

33. attention is given to how people of the other race feel when things are said and done to them
34. people try to do away with their racial prejudices

7.0 School Program

Items 35 thru 40

35. there is a "fair" number of white pupils in almost every class
36. there is a "fair" number of black pupils in almost every class
37. doing well on achievement tests and other school tests is very important
38. there are school programs which prepare pupils for getting a job when they finish high school
39. there are special programs which help pupils speak so that they can be understood
40. there are learning materials which show that the blacks are important in our country

8.0 Extra-curricular Activities

Items 41 thru 45

41. clubs and activities (bands, team sports, student government, cheerleaders, homecoming events, etc.) have some members of both races taking an active part
42. clubs and activities have leaders from each race from time to time
43. special recognition, awards, and honors are given to pupils of both races from time to time
44. school social activities encourage members of both races to take an active part
45. school social activities include pupils of both races in planning and arranging for the events

9.0 Decision-making

Item 46

46. some pupils, teachers, parents, school workers, community leaders, etc., of both races should be asked their opinions when decisions about racial matters which affect them, need to be made

10.0 Communication

Item 47

47. pupils, teachers, parents, school workers, community leaders, etc., are told about what is being done and planned concerning racial matters

DESEGREGATION QUESTIONNAIRE

INFORMATION

Please respond to each category by writing in the information requested or by placing a check in the space that best describes you or your situation in the school.

I. SCHOOL SYSTEM _____

II. SEX: Male (1) _____, Female (2) _____

III. AGE:

_____ (1) 12-13
_____ (2) 14-15
_____ (3) 16-19
_____ (4) 20-29
_____ (5) 30-39
_____ (6) 40-49
_____ (7) 50 or over

IV. RACE: Black (1) _____, White (2) _____, Other (3) _____

V. GRADE: (if applicable)

_____ (1) fifth grade
_____ (2) sixth grade
_____ (3) seventh grade
_____ (4) eighth grade
_____ (5) ninth grade
_____ (6) tenth grade
_____ (7) eleventh grade
_____ (8) twelfth grade

VI. POSITION IN THIS SCHOOL OR SCHOOL SYSTEM:

_____ (01) pupil
_____ (02) teacher
_____ (03) administrator
_____ (04) counselor
_____ (05) supervisor
_____ (06) curriculum worker
_____ (07) bus driver
_____ (08) janitor
_____ (09) cafeteria worker
_____ (10) secretary
_____ (11) board of education member
_____ (12) parent
_____ (13) community representative
_____ (14) other certified staff
_____ (15) other non-certified staff

VII. NAME THE SCHOOL IN WHICH YOU WORK, ATTEND, OR HAVE PRIMARY INTEREST: _____

VIII. HOW LONG HAVE YOU BEEN IN THIS SCHOOL SYSTEM?

_____(1) 1st year _____(3) 4-5 years _____(5) 10 or more years

_____(2) 1-3 years _____(4) 6-9 years

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Appendix VII

SCHOOL INTEGRATION QUESTIONNAIRE FOR PARENTS

Thomas M. Coolsby, Jr., University of Georgia

Harry S. Blanton and Robert B. Frary,

National Laboratory for Higher Education

Directions:
A. Either or both parents or guardians may answer.
B. Check no more than one blank for each question.
C. Leave blank any question you cannot answer due to lack of information.
D. Do not put your name or other identifying information on this questionnaire.

1. Who is answering these questions?

__ Mother (or woman guardian)
__ Father (or man guardian)
__ Both parents (or both guardians)

2. Is your third grader a boy or a girl?

__ Boy
__ Girl

3. Was your third grader in Henry County schools in the second grade?

__Yes
__ No

4. What is your race?

__ Black
__ White

5. Has your child's obedience changed since integration?

__ More obedient
__ No change
__ Less obedient

6. Has your child's attitude toward school changed since integration?

__ Better attitude
__ No change
__ Poorer attitude

7. Does your child seem as "happy" with school as before integration?

__ More happy
__ No change
__ Less happy

8. Do you think your child has picked up "dirty" language at school since integration?

__ Yes
__ No

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9. Do you think there have been more fights at school since integration?

__ Yes, between blacks and whites. __ No change

__ Yes, but not between blacks and whites.

10. Do you feel that school policies are prejudiced against your child?

__ Yes __ No

11. Does your child seem to fight or rough-house more since integration?

__ More __ No change

__ Less

12. Do you feel that your child is ignored or left out of things at school since integration?

__ Yes, problem is worse since integration. __ No change since integration

__ No, problem is better since integration.

13. Have your child's manners changed since integration?

__ Better manners __ No change

__ Poorer manners

14. Do you feel that school books and other materials provide a good cultural background for your child?

__ Yes, they are satisfactory.

__ No, they overemphasize white, middle-class culture.

__ No, for another reason. Give reason: _____

15. Has your child's vocabulary changed since integration?

__ Better vocabulary __ No change

__ Poorer vocabulary

16. Do you think your child's understanding of people of another race has changed since integration?

__ More understanding __ No change

__ Less understanding

17. Has your child's use of bad grammar changed since integration?

__ Better grammar __ No change

__ Worse grammar

18. Has your concern for your child's moral development changed since integration?

__ More concerned __ No change

__ Less concerned

19. Do you fear that your child will bring home a friend of another race?

__ Yes __ No

20. Do you think the efficiency of the Henry County schools had changed since integration?

__ More efficient __ No change

__ Less efficient

21. Do you believe Henry County lost many good teachers as a result of integration?

__ Yes, a substantial number were lost.

__ No, few if any were lost.

22. Do you feel that white teachers tend to be prejudiced toward your child?

__ Yes __ No

23. Do you feel that black teachers tend to be prejudiced toward your child?

__ Yes __ No

24. Do you think there has been a change in the overall quality of the education your child has been getting since integration?

__ Better education __ No change

__ Poorer education

25. How do you think black and white teachers compare?

__ Black teachers are better __ No difference

__ White teachers are better.

26. How do you think your child's chances of graduating from high school are affected by integration?

__ More likely to graduate __ No difference

__ Less likely to graduate

27. Do you think cleanliness or upkeep of school buildings and grounds has changed since integration?

__ Conditions are better. __ No change

__ Conditions are worse.

28. Do you think the speed of instruction has changed since integration?

__ Class has speeded up. __ No change

__ Class has slowed down.

29. Do you think teachers have tried to slow or speed up their classes as a result of integration?

__ Yes __ No

30. Do you think the number of inter-racial marriages will increase as a result of integration?

__ Yes __ No

31. Do you think that your child's opinion of himself has changed since integration?

__ Better opinion of self __ No change

__ Poorer opinion of self

32. Does school bus transportation cause your child trouble that was not there before integration?

__ Yes __ No

33. Do you think the quality of the school cafeteria has changed since integration?

__ Better quality __ No change

__ Poorer quality

34. Do you think the amount of stealing among students has changed since integration?

__ More stealing __ No change

__ Less stealing

35. Do you think the amount of cheating on school papers has changed since integration?

__ More cheating __ No change

__ Less cheating

36. How well do you think the PTA functions since integration?

__ Better __ No change

__ Not as well

37. Do you object to your child being taught by a person of another race?

__ Yes __ No

38. Do you object to your child having a school bus driver of another race?

__ Yes __ No

39. How fairly do you think blacks and whites are represented among school employees?

Teachers: __ Too many blacks
__ Fair representation
__ Too many whites

Administrators: __ Too many blacks
(principals, __ Fair representation
etc.) __ Too many whites

Other employees: __ Too many blacks
__ Fair representation
__ Too many whites

40. How good a job do you feel the school system is doing with integration?

__ Good job
__ Fair job
__ Poor job

Recommended Letter to Parents to Accompany School
Integration Questionnaire for Parents

Dear Parents:

As you know, the public schools have recently undergone a large change toward complete racial integration. In order to help such a change go as smoothly as possible, school people need to know parents' opinions about the schools under this stage of integration.

Therefore, please answer the enclosed questions and send them back to school with your child. Some of the questions may seem unpleasant. These are included because they represent fears about school integration that have been expressed by some people both black and white. We need to find out how people feel about these problems at this point in the school year.

Do not put your name on the questions. Just send it back to school with your child. The questions will be processed at the University of Georgia in Athens. No one in the county will read any of your answers.

At a later time the total answers to each question will be reported to all parents through the school. This reporting will be done in the hope that better parent understanding and response to school problems will result.

Thank you for your cooperation.

Sincerely,

Superintendent of Schools

Enc.

Appendix VIII

Individualized Materials Evaluation Data

Number of cases = 99

Reading Passages

Passage No.	Average Proportion Correct	Standard Deviation	Correlation With ITBS-R	Correlation With ITBS-V	Cases Omitted
1	0.72	0.27	0.30	0.32	20
2	0.75	0.26	0.33	0.39	8
3	0.59	0.25	0.33	0.49	6
4	0.67	0.24	0.29	0.38	3
5	0.68	0.26	0.38	0.43	5
6	0.65	0.21	0.34	0.45	16
7	0.62	0.25	0.44	0.47	7
8	0.52	0.27	0.23	0.33	6
9	0.60	0.28	0.34	0.50	8
10	0.62	0.26	0.33	0.37	6
11	0.62	0.27	0.36	0.30	10
12	0.58	0.27	0.45	0.47	5
14	0.63	0.27	0.45	0.50	4
15	0.58	0.28	0.38	0.51	8
17	0.58	0.25	0.42	0.44	6
18	0.57	0.26	0.48	0.42	6
19	0.66	0.27	0.47	0.49	11
20	0.57	0.23	0.33	0.42	9
22	0.61	0.24	0.47	0.55	10
23	0.62	0.26	0.43	0.52	11
24	0.54	0.27	0.33	0.43	8
25	0.59	0.26	0.37	0.38	9
26	0.66	0.26	0.33	0.47	11
27	0.68	0.26	0.32	0.41	13
29	0.63	0.24	0.38	0.38	11
31	0.59	0.24	0.25	0.41	13
32	0.61	0.25	0.39	0.39	14

Individualized Materials Evaluation Data Continued

Passage No.	Average Proportion Correct	Standard Deviation	Correlation With ITBS-R	Correlation With ITBS-V	Cases Omitted
33	0.59	0.24	0.40	0.37	12
34	0.62	0.24	0.33	0.33	14
36	0.56	0.25	0.33	0.43	16
37	0.63	0.26	0.32	0.45	16
38	0.64	0.28	0.30	0.36	17
39	0.68	0.24	0.34	0.43	14
40	0.60	0.26	0.25	0.30	17
41	0.57	0.29	0.17	0.32	17
42	0.62	0.26	0.28	0.43	20
44	0.54	0.26	0.14	0.22	26
45	0.61	0.24	0.24	0.35	21
46	0.57	0.26	0.21	0.34	23
47	0.57	0.25	0.18	0.20	28
49	0.75	0.25	0.29	0.23	30
50	0.71	0.24	0.20	0.33	19
51	0.70	0.25	0.20	0.34	20
52	0.74	0.25	0.20	0.24	21
53	0.64	0.24	0.20	0.22	19
54	0.71	0.22	0.04	0.07	24
55	0.76	0.25	0.33	0.22	23
56	0.64	0.25	0.13	0.18	24
57	0.76	0.23	0.19	0.31	23
58	0.67	0.26	0.22	0.22	24
59	0.74	0.25	0.32	0.40	26
60	0.72	0.24	0.26	0.23	23
62	0.68	0.26	0.09	0.18	29
63	0.77	0.23	0.19	0.22	29
64	0.61	0.26	0.25	0.24	32
66	0.74	0.24	0.39	0.36	35
68	0.68	0.25	0.22	0.23	36
69	0.70	0.27	0.18	0.25	33

Individualized Materials Evaluation Data Continued

Passage No.	Average Proportion Correct	Standard Deviation	Correlation With ITBS-R	Correlation With ITBS-V	Cases Omitted
70	0.69	0.24	0.30	0.32	33
72	0.70	0.24	0.27	0.24	35
74	0.58	0.26	0.42	0.32	33
76	0.65	0.25	0.14	0.21	39
77	0.63	0.24	0.29	0.33	41
78	0.73	0.25	0.34	0.38	39
79	0.75	0.24	0.16	0.28	42
81	0.78	0.24	0.34	0.36	41
82	0.66	0.25	0.09	0.25	42
83	0.66	0.24	0.02	0.13	40
84	0.67	0.24	0.11	0.27	40
85	0.72	0.26	0.33	0.42	45
87	0.68	0.25	0.36	0.40	43
88	0.67	0.24	0.28	0.28	45
89	0.69	0.26	0.30	0.38	41
90	0.69	0.24	0.30	0.37	45
91	0.68	0.27	0.28	0.39	41
92	0.74	0.21	0.18	0.34	46
93	0.67	0.27	0.25	0.27	47
95	0.73	0.28	0.37	0.41	50
96	0.65	0.25	0.37	0.40	51
98	0.67	0.21	0.20	0.25	52
99	0.67	0.25	0.32	0.32	53
100	0.67	0.28	0.33	0.32	53
101	0.70	0.25	0.27	0.39	53
101	0.70	0.25	0.27	0.39	53
102	0.76	0.25	0.34	0.37	53
103	0.65	0.26	0.16	0.26	52
104	0.61	0.22	0.27	0.35	60
105	0.66	0.25	0.38	0.53	61
106	0.90	0.20	0.18	0.26	65
108	0.74	0.27	0.43	0.49	39

Individualized Materials Evaluation Data Continued

Passage No.	Average Proportion Correct	Standard Deviation	Correlation With ITBS-R	ITBS-V	Cases Omitted
109	0.76	0.25	0.39	0.39	41
110	0.78	0.24	0.30	0.42	41
111	0.68	0.26	0.39	0.45	44
112	0.70	0.29	0.41	0.47	42
113	0.72	0.27	0.36	0.43	45
114	0.70	0.28	0.40	0.48	48
115	0.75	0.24	0.32	0.35	44
116	0.70	0.25	0.39	0.37	44
117	0.77	0.29	0.45	0.38	42
118	0.79	0.27	0.34	0.36	46
119	0.82	0.24	0.24	0.36	44
120	0.79	0.25	0.21	0.47	44
121	0.77	0.24	0.16	0.32	49
122	0.77	0.26	0.36	0.50	47
123	0.77	0.23	0.28	0.25	52
124	0.70	0.29	0.45	0.37	48
125	0.85	0.24	0.35	0.33	48
126	0.63	0.28	0.37	0.43	50
127	0.74	0.26	0.45	0.36	49
128	0.75	0.25	0.42	0.49	50
129	0.73	0.27	0.18	0.24	53
130	0.65	0.26	0.33	0.51	50
131	0.69	0.28	0.43	0.54	50
132	0.69	0.24	0.46	0.50	50
133	0.67	0.26	0.41	0.50	50
135	0.65	0.24	0.50	0.40	63
136	0.73	0.22	0.37	0.47	64
137	0.73	0.20	0.47	0.49	64
138	0.70	0.19	0.45	0.40	65
139	0.70	0.25	0.41	0.36	65
140	0.63	0.24	0.36	0.39	68
141	0.62	0.25	0.37	0.43	69

Individualized Materials Evaluation Data Continued

Passage No.	Average Proportion Correct	Standard Deviation	Correlation With ITBS-R	ITBS-V	Cases Omitted
142	0.62	0.27	0.38	0.42	68
143	0.65	0.23	0.53	0.51	69
144	0.64	0.30	0.52	0.41	69
145	0.61	0.26	0.41	0.31	69
146	0.61	0.25	0.47	0.47	69
147	0.63	0.29	0.34	0.41	71
148	0.55	0.27	0.46	0.50	70
149	0.65	0.25	0.41	0.46	72
150	0.60	0.27	0.36	0.30	72
153	0.69	0.26	0.56	0.55	73

Activities (Maps, Charts, etc.)

Passage No.	Average Proportion Correct	Standard Deviation	Correlation With ITBS-R	ITBS-V	ITBS-Maps	Cases Omitted
13*	0.81	0.27	0.21	0.19	0.18	22
16	0.79	0.26	0.08	0.12	0.29	33
28	0.90	0.20	0.07	0.16	0.33	28
30	0.78	0.29	0.15	0.21	0.35	18
35	0.89	0.21	0.15	0.12	0.31	27
43	0.79	0.27	0.08	0.12	0.34	28
61	0.71	0.30	0.21	0.21	0.32	27
65	0.85	0.25	0.19	0.17	0.39	42
73	0.83	0.25	0.06	0.06	0.34	36
75	0.91	0.18	0.24	0.09	0.36	38
107*	0.58	0.27	0.42	0.47	0.14	65
134	0.69	0.24	0.56	0.46	0.38	64
151	0.70	0.24	0.29	0.39	0.41	73
152	0.65	0.27	0.38	0.26	0.27	72

*Non map activities